MIDWIFERY IN JAPAN

Japanese Nursing Association

Contents

Ⅲ. Recent Topics Requiring Special Attention

Ⅰ. Perinatal Care System and Maternal and Child Health in Japan

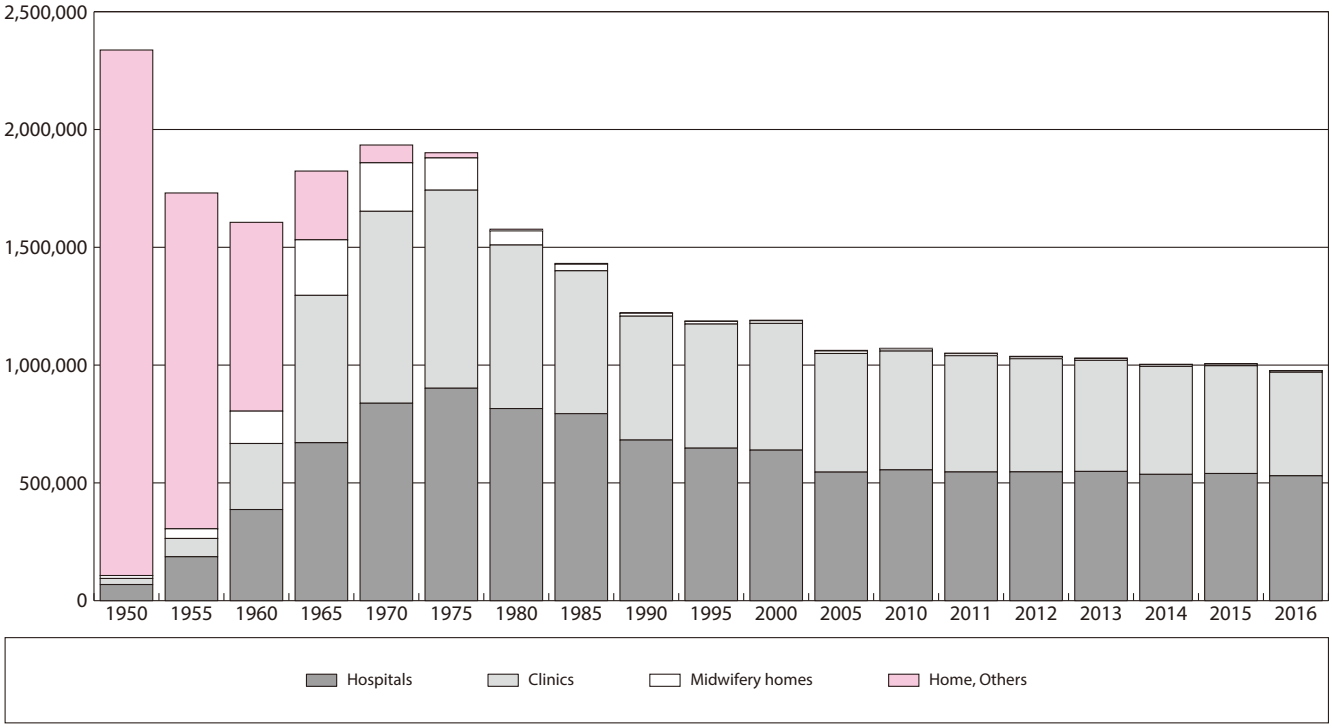
1. Statistics

1) Trends in Indicators Concerning Maternal and Child Health

Perinatal and infant mortality rates in Japan, commonly regarded as maternal and child health indicators, rank among the lowest in the world. Special attention, however, should be directed in the future to measures for maternal and child health promotion and to improvement of perinatal medical service system.

(1) Births

In Japan, both the number of births and the birth rate have been decreasing since 1970. Although the total fertility rate has shown a slight increase in the recent years, the increase is not large enough to overturn the ongoing issue of low birth rate in Japan. The total fertility rate in 2015 was 1.45, lower than 2.08 required for population stability. The total number of births in 2015 was 1.00 million, and if the current trend of decreasing birth rate continues, the projected number of births for 2065 is expected to be approx. 0.55 million, about the half of the present level.[1)]



(Prepared by the Japanese Nursing Association based on the data of Demographic Survey 2016)[2)]

Fig. 1: Number of Births by the Place of Birth (1950-2015)

The place of birth had been home until shortly after World War II. In 1950, childbirths at facilities (hospitals, clinics and midwifery homes) took up only 4.6% of all childbirths. Under the post-war guidance by GHQ, Japanese people shifted over from delivery at home to delivery at facilities. In 1970, childbirths at facilities (hospitals, clinics and midwifery homes) increased to 96.1%, reversing the shares of childbirths at home and at facilities in about 20 years. At present, most people give births at medical institutions, with hospitals taking up 54.3%, clinics 45.0%, midwifery homes 0.6%, and home 0.2%.[2)]

(2) Maternal Mortality

The maternal mortality rate in 2015 was 3.8 (per 100,000 childbirths), showing that Japan has one of the lowest maternal mortality rates in the world. The major causes of maternal mortality are post-postpartum hemorrhage, obstetric embolism, etc.[3) 4)]

(3) Perinatal Mortality

Japanese perinatal mortality refers to stillbirths after the 22nd week of pregnancy and early neonatal deaths within 1 week after birth. WHO states in its International Statistical Classification of Diseases and Related Health Problems-10 that the "perinatal period commences at 22 completed weeks (154 days) of gestation and ends seven completed days after birth." Based on this definition, the method of calculating perinatal deaths was revised in 1995 in Japan.

The perinatal mortality rate, which is the combined number of stillbirths after the 28th week of pregnancy and of early neonatal deaths per 1,000 live births is also calculated to compare Japanese data with international data. Japan's perinatal mortality rate in 2015 was 2.5, which is among the lowest in the world.

There are two main causes of perinatal deaths concerning the fetus, which include "diseases generated during the perinatal period" (84.3%), and "congenital malformations and chromosomal abnormalities" (14.0%). The non-fetal factors include "non-maternal based causes" (39.9%), "maternal diseases that may be unrelated to the current pregnancy" (25.9%), and "maternal complications occurring in the placenta, umbilical cord and fetal membrane" (24.2%).[3)]

(4) Infant Mortality

The infant mortality rate per 1,000 live births was 1.9 in 2015, showing that Japan has one of the lowest infant mortality rates in the world. The leading cause of infant death is "congenital malformation and chromosomal abnormality", followed by "perinatal-specific respiratory disorders and cardiovascular disorders" and "sudden infant death syndrome". The first leading cause of neonatal deaths within 1 month after birth is "congenital malformation and chromosomal abnormality", and the second is "perinatal-specific respiratory disorders and cardiovascular disorders".

After the Second World War, the major causes of infant deaths continued to be infectious diseases including pneumonia, bronchitis, enteritis, and other diarrheal diseases. Those causes have drastically decreased today. On the other hand, the number of infant deaths caused by congenital malformation and chromosomal abnormality, and diseases generated during the perinatal period have not decreased dramatically. These causes warrant further attention in the future.[3)]

Table 1: Change in Maternal and Child Health Indicators

Year	Population	Live Births	Birth Rate (per 1,000)	Infant Mortality Rate (per 1,000 live births)	Maternal Mortality Rate (per 100,000 live births)	Perinatal Mortality Rate (International standard※)	Stillbirth Rate (per 1,000 births)	Total Fertility Rate
1960	93,418,501	1,606,041	17.2	30.7	117.5	—	100.4	2.00
1965	98,274,961	1,823,697	18.6	18.5	80.4	—	81.4	2.14
1970	103,119,447	1,934,239	18.8	13.1	48.7	21.7	65.3	2.13
1975	111,251,507	1,901,440	17.1	10.0	27.3	—	50.8	1.91
1980	116,320,358	1,576,889	13.6	7.5	19.5	11.7	46.8	1.75
1985	120,265,700	1,431,577	11.9	5.5	15.1	—	46.0	1.76
1990	122,721,397	1,221,585	10.0	4.6	8.2	5.7	42.3	1.54
1995	124,298,947	1,187,064	9.6	4.3	6.9	—	32.1	1.42
2000	125,612,633	1,190,547	9.5	3.2	6.3	3.8	31.2	1.36
2005	126,204,902	1,062,530	8.4	2.8	5.7	—	29.1	1.26
2010	126,381,728	1,071,304	8.5	2.3	4.1	2.9	24.2	1.39
2015	125,319,299	1,005,677	8.0	1.9	3.8	2.5	22.0	1.45
2016	125,020,252	976,978	7.8	2.0	—	—	21.0	1.44

※ Indicator for international comparison. Sum of the number of stillbirths after the 28th week of pregnancy and the number of deaths in early infancy divided by the number of live births, per 1,000 live births

(Prepared by Japane Nursing Association based on the data of "Demographics of Japan 2018-Trends up 2016" and "Trends is National Health Vol. 64, No. 9. 2017 / 2018")[5) 6)]

2. Perinatal Care System

1) Perinatal Care System

In Japan, prefectures formulate a "perinatal care redevelopment plan", in combination with a "medical care plan", and designate/certify facilities in each prefecture, thereby establishing their respective perinatal care systems.

Medical institutions that handle perinatal care include comprehensive perinatal medical centers, regional perinatal medical centers, and other hospitals, clinics, and midwifery homes that handle deliveries.

Comprehensive perinatal medical centers have functions to provide care for pregnancies that involve high risks to mothers/infants, as well as advanced neonatal care and other perinatal medical care. Regional perinatal medical centers have functions to provide relatively advanced medical care in the perinatal period. Other hospitals, clinics, and midwifery homes that handle deliveries are required to safely undertake normal deliveries, and to establish a collaborative system with institutions for enabling emergency transportation. The perinatal care system in Japan pursues the division of functions of medical institutions in accordance with the relevant risks.

3. Policies

1) Maternal and Child Health Act

The aim of the policies in Japan is to implement comprehensive maternal and child health care from adolescence to pregnancy, childbirth, neonatal and infant periods. Pursuant to the Maternal and Child Health Act, the measures are differentiated for beneficiaries at different periods so that optimal services can be provided that suit their specific needs.

The Maternal and Child Health Act was established to maintain and promote maternal, newborn, and infant health and to contribute to improve the national health by figuring out principles of maternal and child health. The act also aims to provide mothers, newborns and infants health guidance and examination services and other medical measures. It stipulates that it is the role of the municipalities to provide health guidance to pregnant and postpartum women and health check-ups for newborns and infants. The Act respectively defines "pregnant and postpartum women", "newborns", "infants", and "neonates" as follows.

> "Pregnant and postpartum women" refers to women who are pregnant or within one year after childbirth.
> "Newborns" refers to persons who are younger than one year old.
> "Infants" refers to persons between one year old to before school age.
> "Neonates" refers to newborns who are younger than 28 days after birth.

In 2016, following the partial revision of the Child Welfare Act, municipal governments were obliged to establish comprehensive support centers for child-rearing generation, for the purpose of providing continuous support from during pregnancy to the child-rearing period.[3) 7) 8)]

2) Sukoyaka Oyako 21 (2nd Term)

Sukoyaka Oyako 21 (Healthy Parents and Children 21), a national campaign has been promoted since 2000 through the combined efforts of related organizations and groups working toward the common goals of systematizing outstanding and new issues and guiding maternal and child health care on its pathway for the 21st century. This program has four main challenges with 61 indicators as goals for the decade from 2001 to 2010. The four main challenges include: reinforcement health measures during adolescence and promotion of health education; ensuring of a safe and comfortable pregnancy/childbirth, and assistance for infertility; development of environmental systems to maintain and improve pediatric medical standards; promotion of the sound development of children and reduction of anxiety concerning childrearing. An interim evaluation was conducted in 2005 and 2009 to review the program, and the final evaluation was conducted in 2013. The results of the final evaluation indicated improvement in approximately 80% of the 69 indicators (74 items). Based on these indicators and challenges, "Sukoyaka Oyako 21 (2nd Term)" was initiated in 2015. "A society where all children grow in good health" was specified as the goal for ten years later. In the 2nd Term, three basic requirements were specified: "Seamless healthcare for expectant/nursing mothers and infants", "Healthcare in school age, adolescence and adulthood", and "Regional development to observe and nourish healthy growth of children". As the two key requirements, "Support to care parents who find difficulty in child rearing" and "Child abuse prevention starting from pregnancy" were specified. Targets were set in steps, so that steady initiatives would be facilitated over the next ten years, through the analysis of present status and expected future trends based on existing statistical surveys.[3) 9) 10) 11)]

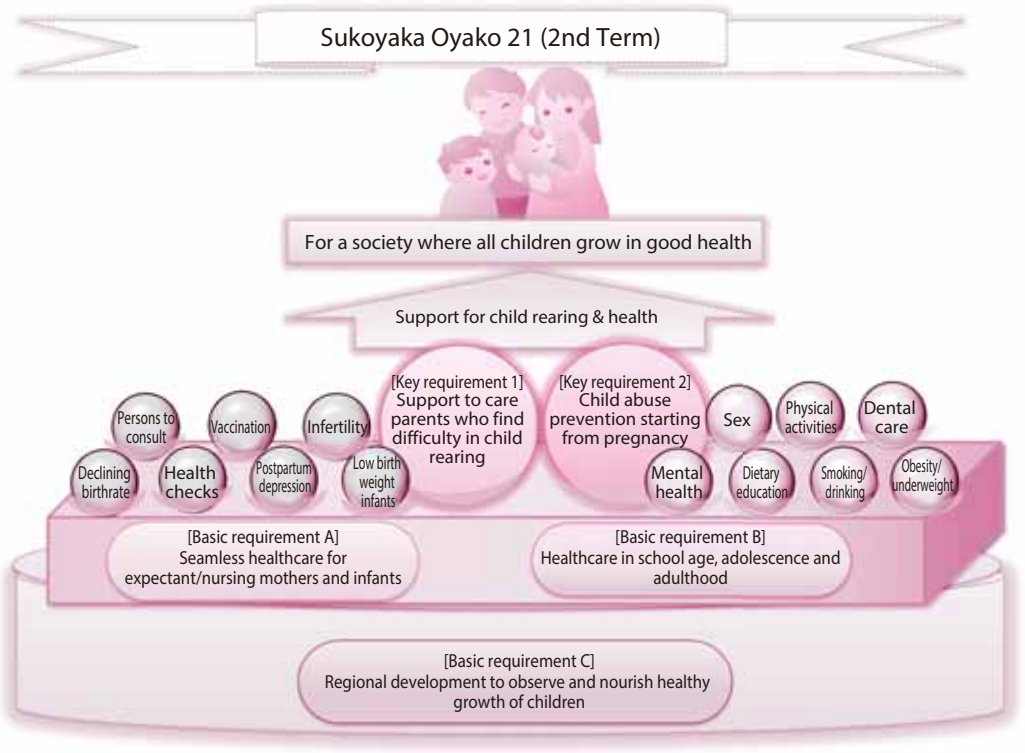


Fig. 2 Sukoyaka Oyako 21 (2nd Term)

(Sukoyaka Oyako 21 HP)[12]

3) Child and Childrearing Support Plan

As a specific implementation plan for key measures based on the Outline of Measures for Society with Decreasing Birthrate, the national government formulated the "Child and Childrearing Support Plan" in 2004. In 2010, the Cabinet decided to formulate a new outline of measures for a society with a decreasing birthrate, "Children and Childrearing Vision – for the Society Full of Smiling Children –". The new outline stipulated the basic idea of "Children First (Children at the center)" with the aim of building a society that values children.

In 2012, the Child and Childrearing Support Law was established to construct a new structure by unifying child and childrearing support systems and their funds. It comprehensively promotes improvement in school education and child care for toddlers, and community child and childrearing support. The law aims to achieve this goal through enhanced regional support for children and childrearing, and the establishment of children and childrearing conferences. Furthermore, the Cabinet decided to formulate the 3rd Outline of Measures for Society with Decreasing Birthrate in 2015, stipulating detailed support in accordance with the stages of marriage, pregnancy, childbirth and childrearing. The Outline of Measures for Society with Decreasing Birthrate, specifies the respective numerical targets, and will be reviewed in about five years.[13) 14)]

4) Main Measures

The aim of the policies is to implement comprehensive maternal and child health care under a consistent system covering premarital preparation, pregnancy, childbirth and the neonatal and infant periods. The measures are differentiated for beneficiaries at different periods so that optimal services can be provided that suit their specific needs.

(1) Distribution of the Maternal and Child Health Handbook

A pregnant woman has to notify the municipality of her pregnancy (Maternal and Child Health Law, Article 15). Upon registration of pregnancy, the Maternal and Child Health Handbook is issued to her (Article 16).

This notification is important as the starting point for the administration to recognize pregnancy, and to provide consistent maternal and child care service from during pregnancy through to infancy.

The Maternal and Child Health Handbook originated from the Maternal Handbook first issued in 1942, which established a system of pregnancy registration and provided pregnant and postpartum women with health care support.

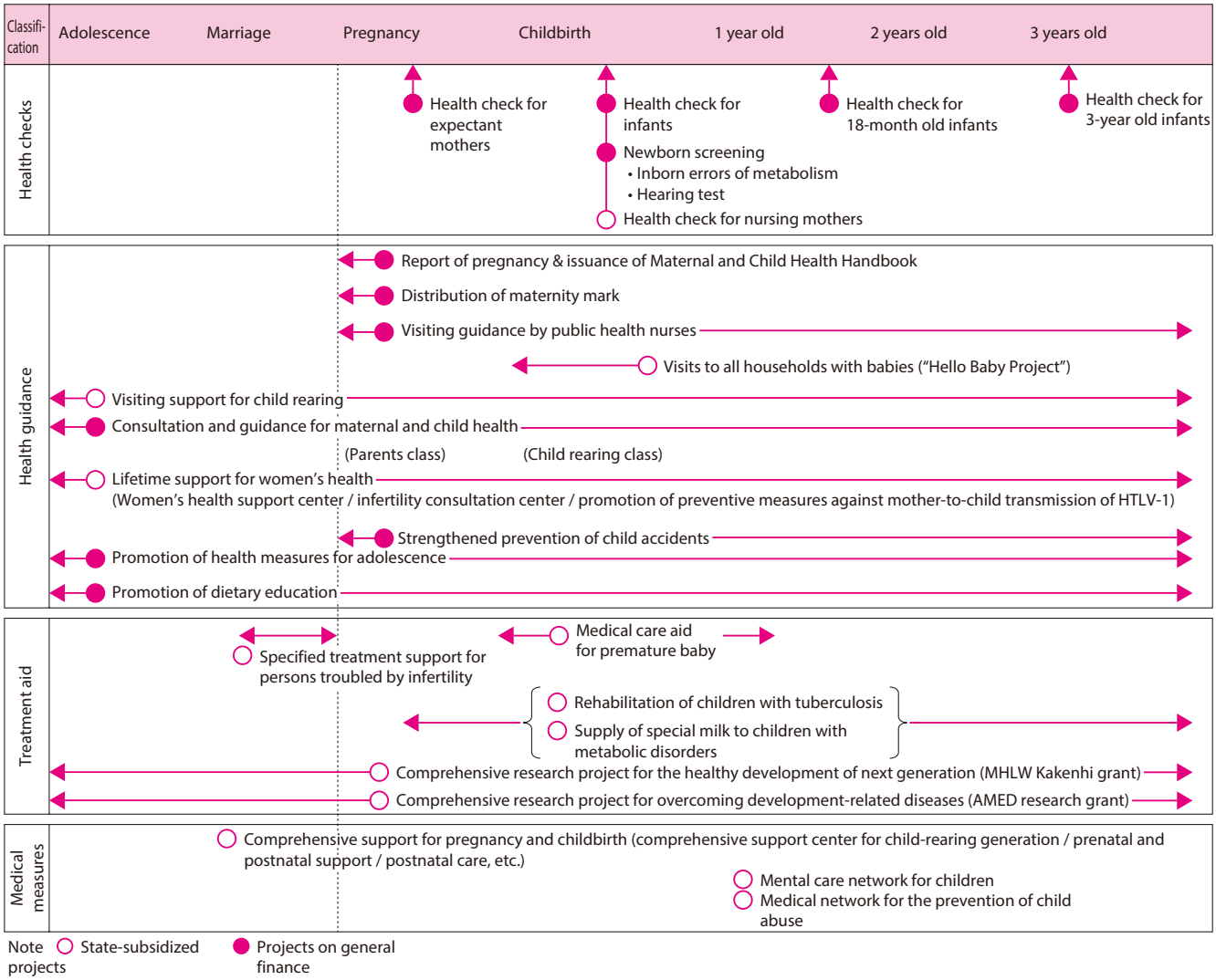


Fig. 3 System of Measures for Maternal and Child Health

(Trends in National Health Vol. 64, No. 9, 2017 / 2018)[15]

The Maternal and Child Health Handbook functions as a health record to follow the development process, including pregnancy, birth, and infant growth, as well as an immunization record prior to reaching school age. Furthermore, the handbook can be used by the entire family for basic information on pregnancy, childbirth and child care. Such information is extremely helpful for coherent maternal and child health care throughout the period of pregnancy, childbirth and childcare. Various uses of the handbook are also effective in boosting awareness of the mother and the father. The handbook also enables the provision of continuous and consistent care, even if maternal and child care service should be provided by different specialists in difference places and on different occasions.

As part of the measures to combat declining birth rate, the municipal subsidy for antenatal check-ups has been increased and the Maternal and Child Health Handbook now includes free coupons for 14 antenatal check-ups. The Maternal and Child Health Law also stipulates that the municipality provides health check-ups to infants of 18-months and 3-years of age. Other benefits provided by certain municipal governments include free coupons for health check-ups for infants and toddlers.

In some municipalities, the handbook is available in a number of foreign languages (English, Chinese, Korean, Spanish, Indonesian, Portuguese, Thai, and Tagalog) for foreigners residing in Japan and for Japanese residing overseas. Braille versions of the Maternal and Child Health Handbook are also being issued.[3]

Maternal and Child Health Handbook
(Mother and Child Health Organization HP)[16]

(2) Health/Home Guidance for Pregnant Women and Infants

Health guidance and home guidance concerning pregnancy, childbirth, and child care are mainly provided by the municipality (Maternal and Child Health Law, Article 10). As needed, midwives, public health nurses, etc. visit the homes and provide health guidance for pregnant and postpartum women, newborns, and premature babies (Articles 11, 17, and 19).

In 2009, subsidization of antenatal check-ups during pregnancy was increased from five to about fourteen check-ups, in order to upgrade the health management of pregnant women, and to reduce their economic burden. In 2017, the postpartum check-up service was started to prevent postpartum depression and child abuse and provide necessary support, at an early stage of two weeks after childbirth and upon one-month check-up.[3)]

*** Home-visit Guidance Project for All Infants**

Home visits are made for all households with infants aged up to 4 months so that their caregivers can discuss various problems or anxieties they have, and information on childrearing support can be provided. At the same time, mental and physical conditions of parents and children, as well as the childcare environment can be grasped, so that households that require support can be detected and appropriate services can be provided. In this way, a home-visit, which is the first opportunity for the household rearing infants to have contact with the local community, will help households keep away from being isolated and secure a sound childrearing environment. This project is implemented by municipal governments. The visiting staffs consist of midwives, public health nurses, nurses, maternal and child care promoting personnel, personnel who have experienced childrearing, and others. The results of visits are discussed and shared at case meetings by related personnel. Appropriate and diverse services are requested for households that are considered to require support, thereby strengthening networks for local childrearing support activities.[17) 18)]

(3) Health Checks[3)]

Health checks are important to identify diseases and abnormalities at an early stage, and to request health guidance for any risks identified at an early stage in order to prevent the occurrence of diseases. Health checks for pregnant and postpartum women and for newborns and infants were started in 1948. Health checks can be received in methods specified by municipal governments, and consist of antenatal check-ups, postpartum check-ups, and newborn/infant check-ups.

1) Antenatal Check-ups

Antenatal check-ups aim at identifying the health condition of pregnant women and the fetal course of development, thereby identifying abnormalities at an early stage. Antenatal check-ups are partially subsidized, and it is regarded desirable to receive about 14 check-ups during pregnancy.

2) Postpartum Check-ups

Postpartum check-ups are implemented for postpartum women shortly (two weeks and one month) after childbirth, in order to prevent postpartum depression and abuse of newborns. In 2017, the postpartum check-up project was started for municipal governments to subsidize two postpartum check-ups.

3) Newborn/Infant Check-ups

Newborn/infant check-ups aim at identifying the development of newborns and infants, providing health guidance when necessary, identifying diseases and disabilities at an early stage, and starting treatment and rehabilitation support at an early stage. The Maternal and Child Health Act obliges municipal governments to implement newborn/infant check-ups for the following:

i. Infants who are older than 18 months but younger than 24 months

ii. Infants who are older than three years but younger than four years

In addition to the above, some municipal governments implement health checks for three- to four-month old infants, and for nine- to ten-month old infants. In addition, municipal public health nurses take the leadership in providing continuous individual support following various health checks, and in holding childrearing support classes, which comprise important elements of maternal and child care.

(4) Other Measures

1) Distribution of the Maternity Logo

As part of the Sukoyaka Oyako 21 (Healthy Parents and Children 21) campaign efforts, Maternity Logo was introduced in March 2006. The Logo promotes an environment of safety and comfort for women during pregnancy and child delivery period by promoting public recognition of pregnant women. By displaying the logo while pregnant women use public transportation, it is easier for them to show that they are pregnant, and thus the logo promotes the development of a friendly environment for pregnant/postpartum women. Public administrations and private businesses are actively engaged in increasing the distribution of Maternity Logos by distributing Maternity Logos with Maternal and Child Health Handbooks, and by displaying posters about Maternity Logos.[3)]

"I'm Expecting A Baby."

Maternity Logo[19)]

2) Comprehensive Support Centers for Child-Rearing Generation

The Comprehensive Support Centers for Child-Rearing Generation have the role of identifying the conditions of pregnant and postpartum women and newborns and infants in a continuous and comprehensive manner, thereby enabling pregnant and postpartum women and guardians to consult public health nurses, midwives and other specialists, while providing seamless support for pregnant and postpartum women and newborns and infants through arrangements for necessary support and coordination with related institutions. The background for establishing these centers was as follows. 1) Variation occurred in the mutual help and cooperation power in local communities, due to diversified values and other factors. 2) Needs have risen for support related to pregnancy, childbirth and childrearing, due to nuclearization of the family and social advancement of women. 3) Support related to pregnancy, childbirth and childrearing had been provided on an institution basis, instead of continuous and comprehensive support.

Under these circumstances, all the municipalities were obligated to make a sincere effort in establishing Comprehensive Support Centers for Child-Rearing Generation to provide necessary support in a comprehensive manner. The centers are to be established in all municipalities by March 2020, in order to play important roles as the core of local development for safe and secure pregnancy, childbirth and childrearing. The national government has published the Operational Guidelines for Comprehensive Support Centers for Child-Rearing Generation, in order to promote this project.[8)]

3) Antenatal & Postpartum Support Project / Postpartum Care Project

It has become different for pregnant and postpartum women to seek support related to pregnancy, childbirth and childrearing, due to nuclearization of the family, geographical distance from relatives, and other factors. Under these circumstances, these projects have been implemented since 2015 for providing seamless support from during pregnancy through to the childrearing period, in order to relieve pregnant and postpartum women of anxiety and burden. The national government has published the Guidelines for Antenatal and Postpartum Support Project and the Guidelines for Postpartum Care Project, in order to promote these projects. The Antenatal and Postpartum Support Project is targeted at pregnant and postpartum women who use the Comprehensive Support Centers for Child-Rearing Generation, and who are regarded as applicable for the support due to the absence of dependable persons close to them or for other reasons. The Postpartum Care Project is targeted at postpartum women and their children who cannot receive adequate assistance in childrearing and other aspects from their families, etc., and who have ill mental/physical condition or concerns in childrearing, or otherwise require support.

Both projects are implemented by municipal governments. Care is provided by midwives, public health nurses, and other nursing professionals.

Activities in the Antenatal and Postpartum Support Project consist of home visits, consultation service by phone or by e-mail, consultation service in person, group activities aimed at friend making and peer support, and others.

The Postpartum Care Project consists of stay type, where postpartum care is provided during users' stays at facilities; outreach type, where health guidance and care are provided through visits to users' homes; day service type, where necessary care is available by visiting hospitals, clinics, midwifery homes and other facilities; and others.

4) Economic Assistance for Infertility Treatment

In Japan, increasing persons are receiving infertility treatment due to marriages and childbirths at older ages. Infertility treatment imposes substantial economic burden on users, because even expensive therapies are not covered by medical insurance. Under these circumstances, part of expenses on infertility treatment have been subsidized since 2004. Subsidized users increased from 17,657 in 2004 to 160,368 in 2015. The subsidy project was reviewed in 2013, and subsidization of infertility treatment for males was also started.

Ⅱ. Midwives in Japan

1. Midwifery Regulation

The midwife and her activities are defined under the Act on Public Health Nurse, Midwife and Nurse (No. 203) established in 1948. The purpose of this law is to improve the quality of public health nurses, midwives, and nurses, and promote medical care and public health. (In December 2001, the law was partially revised, and the title of the law in Japanese was changed slightly.)

Although the law had traditionally defined only professional roles, the revised law in 2006 added provisions concerning the titles of midwives, nurses and assistant nurses (See Article 42 (3) of the Act on Public Health Nurse, Midwife and Nurse).

Act on Public Health Nurse, Midwife and Nurse (Acted in 1948, Revised in 2006)[20)]

[Definition of midwife]

Article 3 Under this law, "Midwife" refers to a woman licensed by the Minister of Health, Labour, and Welfare, who practices midwifery or provides health care to pregnant women, women in the postpartum period, and newborn infants.

[Restrictions on midwifery activities]

Article 30 Only a Midwife licensed under Article 3 shall engage in these activities, except in situations where those activities are performed in accordance with the provisions of the Medical Practitioners Act (Act No. 201 of 1948).

[Restrictions on the use of titles]

Article 42 (3) 2. One who is not a midwife shall not refer to oneself as a midwife nor use other misleading titles.

The Japanese Nursing Association is a member association of the International Confederation of Midwives (ICM). ICM defines midwife as follows.

ICM Definition of the Midwife (adopted in 2005, revised in 2011 and 2017, and subject to the next revision in 2023) [21)]

A midwife is a person who has successfully completed a midwifery education programme that is based on the ICM Essential Competencies for Basic Midwifery Practice and the framework of the ICM Global Standards for Midwifery Education; and is recognized in the country where it is located; who has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery and use the title 'midwife'; and who demonstrates competency in the practice of midwifery.

Scope of Practice

The midwife is recognised as a responsible and accountable professional who works in partnership with women to give the necessary support, care and advice during pregnancy, labour and the postpartum period, to conduct births on the midwife's own responsibility and to provide care for the newborn and the infant. This care includes preventative measures, the promotion of normal birth as more physiological condition, the detection of complications in mother and child, the accessing of medical care or other appropriate assistance and the carrying out of emergency measures.

The midwife has an important task in health counseling and education, not only for the woman, but also within the family and the community. This work should involve antenatal education and preparation for parenthood and may extend to women's health, sexual or reproductive health and child care.

A midwife may practice in any setting including the home, community (including midwifery homes), hospitals, clinics or health units.

Midwives and their activities are regulated as follows by the Act on Public Health Nurse, Midwife and Nurse, as well as other related laws, including the Medical Care Law and the Maternal Protection Law.

1) Definition of the Midwifery Home (Medical Law, Article 2)[22)]

A "Midwifery Home" is a place where a midwife provides midwifery services (excluding those given in a hospital or clinic) to the general public and selective group of people.

2 The Midwifery Home may not consist of facilities that can accommodate 10 or more pregnant, parturient, or puerperal women.

2) Registration of the Midwifery Home (Medical Law, Article 8)[22)]

When a midwife has established a midwifery home, she is required to notify the governor of the prefecture where it is located, within ten days of beginning operations.

3) Collaboration with Medical Institutions (Medical Law, Article 19)[22)]

The organizer of a midwifery home shall provide for contract physicians and hospitals or clinics pursuant to the provisions of an Ordinance of the Ministry of Health, Labour and Welfare.

2 In their contracts to undertake midwifery for pregnant women, midwives who only undertake their duties through visiting shall provide for hospitals or clinics to handle abnormalities in the relevant pregnant women, pursuant to the provisions of an Ordinance of the Ministry of Health, Labour and Welfare.

4) Birth Control Instructor

"Birth control" refers to the planned adjustment of pregnancy and childbirth through contraception. "Birth Control Instructors" refers to persons who are designated by the governor of the prefecture to undertake the practice of instructing women about birth control utilizing the contraceptive devices specified by the Minister of Health, Labour and Welfare. Those who may be designated by the governor of the prefecture are midwives, public health nurses or nurses who have finished the courses which the governor of the prefecture certifies according to the standard set by the Minister of Health, Labour and Welfare.

Nowadays, it is required to make efforts in a variety of places women and their families become aware of birth control at each life stage in addition to consultation as family planning experts. Persons who play such a role were nicknamed as "Reproductive Health Supporter" by JNA as of 2009.[7)]

5) Obligation to Confidentiality

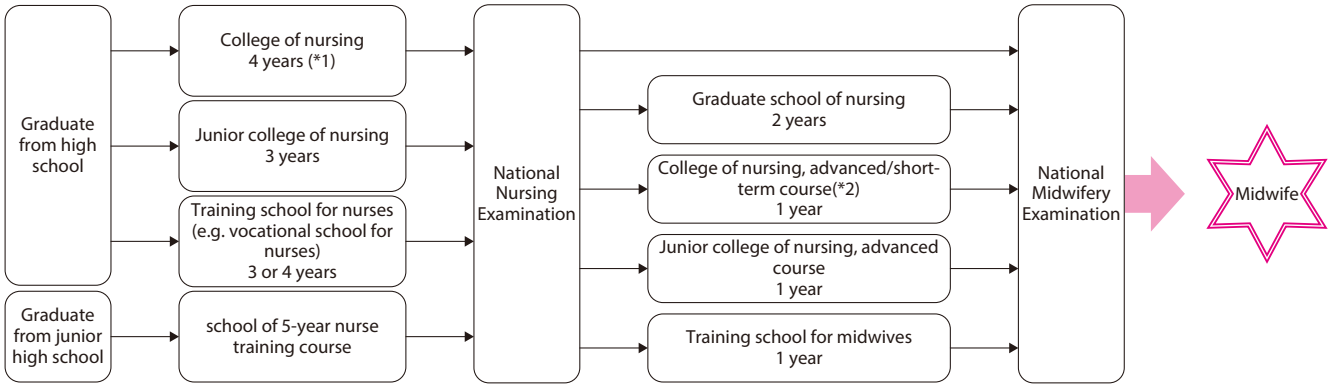
Article 134 of the Penal Code states that physicians, vendors of pharmaceutical products, midwives, lawyers, defendants and notaries, as well as those who previously engaged in these occupations, can be punished by imprisonment for six months or less, or fined a maximum of 100,000yen, if they breached confidentiality without legitimate grounds and disclosed others the clients' information obtained through their practice.[23)]

2. Midwifery Education

1) Basic Midwifery Education

(1) Midwifery Education System

An applicant for the midwife license is required to have acquired certification as a nurse either prior to or simultaneously as acquiring the midwifery license. In addition, the person has to complete the prescribed midwifery courses at college or training school to obtain a midwifery license. The prescribed midwifery course refers to 28 credits described in "(3) Midwifery Curriculum." When the applicant passes the national examination after completing 28 credits, the midwifery license is given by the Minister of Health, Labour and Welfare. Since it is not necessary to renew the license once it is obtained, the holder can continue midwifery practice indefinitely.



*1 At colleges that have education programs for public health nurses and midwives, students are eligible to take the nursing examinations not only for nurses, but also for public health nurses and midwives.
*2 The eligibility to enter an advanced course at a college is graduation from a college.

Fig. 4: Outline of Midwife Education Courses

(Prepared by Japanese Nursing Association)

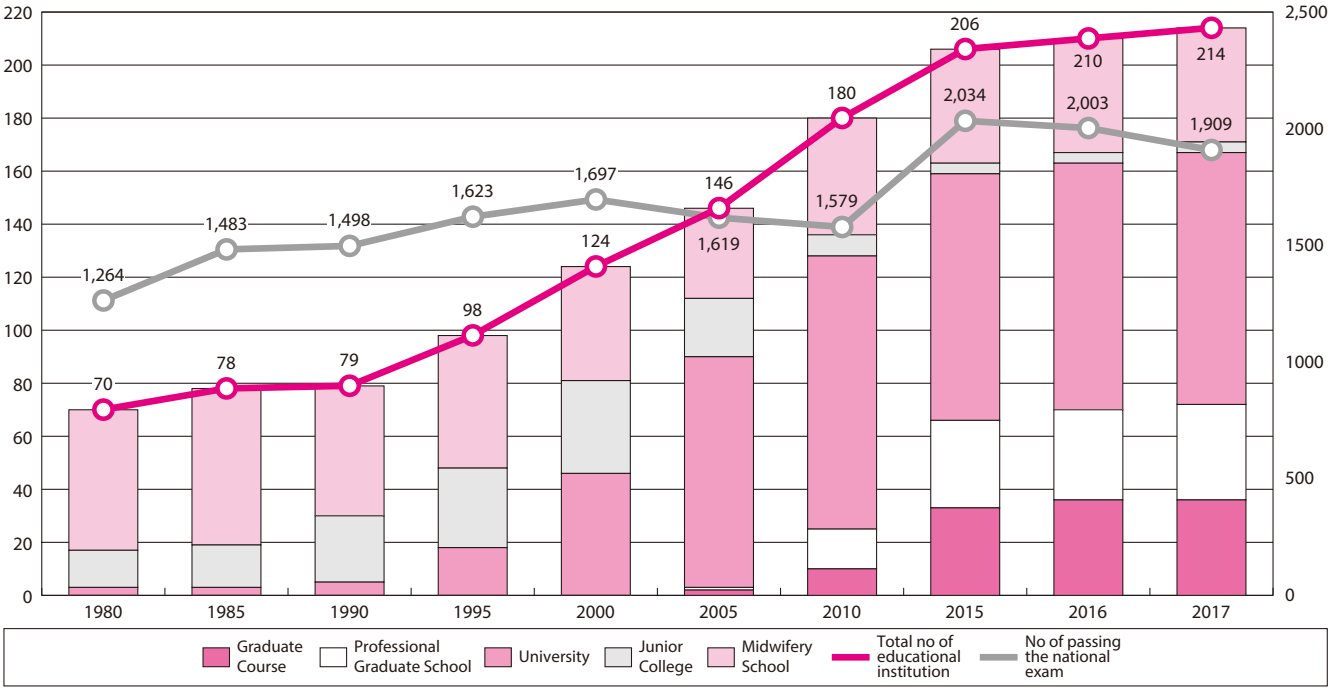
As indicated above, diverse kinds of midwife education are available in Japan. There are eight types of midwife education courses: schools that teach practical skills, vocational schools, junior college advanced courses, colleges, college advanced courses, college short-term courses, graduate schools, and professional graduate schools. Midwife education courses are incorporated into the two years of schooling for graduate schools and professional graduate schools, and the four years of schooling for four-year colleges. The period of schooling is one year or longer for other kinds of schools.[24)]

JNA is making an effort to create a system that provides a 4-year basic nursing education in college/universities unified midwifery education at the graduate level.

(2) Number of Midwifery Schools / Training Schools and Midwifery Courses

Schools and training schools with midwife education courses have been increasing recently, and an increasing number of applicants are passing the National Midwifery Examination.

Professional graduate schools were opened in 2004, and graduate schools and college advanced courses were opened in 2005, and the courses are gradually increasing. As of 2016, there are 35 graduate schools and professional graduate schools (18%), 34 college advanced courses and short-term courses (17%), 81 colleges (41%), four junior college advanced courses (2%), and 43 schools that teach practical skills and vocational schools (22%).[24)]



(Prepared by Japanese Nursing Association based on the data of Japanese Nursing Association Publishing Company, "Nursing Statistical Materials")[25]

Fig. 5: The number of midwifery educational institutions and those passing the national examination

(3) Midwifery Curriculum

In line with the 1997 revision of regulations controlling midwifery education, the current curriculum consists of items as indicated below.

As a result of the April 2008 revision of regulations controlling educational institutions of public health nurses, midwives and nurses, the number of credits for clinical midwifery training will increase to nine in 2010. In addition, the 2009 revision concerning extension of the total years of training in the Act on Public Health Nurse, Midwife and Nurse resulted in the increase in total number of credits for completing course from 22 to 28 for students starting the course in 2012 or later. Moreover, births that can be assisted by midwifery students will be limited to full-term and vaginal births, and cephalic and single births, within a period of from the first stage of labour to two hours later than completing the third stages. Midwifery students are required to assist about ten deliveries. Midwifery practice is performed at hospitals, clinics and midwifery homes.

Exact curriculum details for the educational programs may be set at the discretion of each school, depending upon the school's educational aims.

Table 2: Midwifery Course Content

Subject	Credit	Content
Fundamental of Midwifery	6	○ To learn about basics of midwifery as an activity supporting women throughout their lifetime with a focus on reproductive health ○ To understand the midwife's role to be responsible for respecting the life of mother and child at the same time and to learn bioethics in depth ○ To nurture the ability to support motherhood and fatherhood development placing particular importance on psychological and sociological perspectives of the family ○ To learn about team approach and coordination/ liaison with the related institutions ○ To learn about expertise of midwives, attitudes and stance required for midwifes
Midwifery Diagnostics and Skills	8	○ To nurture the ability to diagnose normal/abnormal pregnancy progression and acquire the latest skills that fit the diagnosis ○ To ensure to acquire the essential midwifery skills required for implementing midwifery process, through improved and strengthened practical training designed for thorough acquisition of essential basic midwifery skills ○ To strengthen the ability responding to emergencies that can occur in childbirth (repair of perineorrhaphy and laceration, neonatal resuscitation, hemostatic treatment and assistance to parturient women and the family of abnormal newborns, etc.) ○ To strengthen assessment techniques of health conditions of pregnant/puerperant women and newborns and assistance techniques based on the assessment result ○ To nurture the ability to assist childbirth respecting the pregnant and parturient women's initiative
Maternal and Child Health in Community	1	○ To nurture the ability to provide maternal and child health services meeting the various needs of citizens as well as the ability to promote regional maternal and child health in cooperation and collaboration with the related persons in public health, medical care, and welfare
Midwifery Management	2	○ To learn about management of midwifery services, operation of maternity clinics, and the perinatal medical care system

Subject	Credit	Content
Clinical Midwifery Training	11	○ To integrate clinical training in midwifery diagnostics and skills, maternal and child health care in the community, and midwifery management. Births assisted by students will be limited, in principle, to full-term, vaginal, cephalic and single births, during a period of from the first stage of labour up to two hours after the completion of the third stage ○ To provide continuous care at least one case of woman from her mid-pregnancy to one month after delivery during the training period ○ To include clinical training to strengthen the ability to assess pregnancy progression through antenatal health check-ups support breastfeeding of puerperant women, and conduct newborn babies' assessment
TOTAL	28	○ To provide at least 930 hours of lecture, practical training, etc.

*1 credit corresponds to 45 hours

(Ministry of Health Labour and welfare, "Instructive Guidelines concerning the Operation of Nurse Training Institutions")[26]

Student Midwives Practice for Neonatal Cardiopulmonary Resuscitation

Student Midwives Practice for Ultrasound Examination

Student Midwives Practice for Health Education

Student Midwives Practice for Birth Assistance

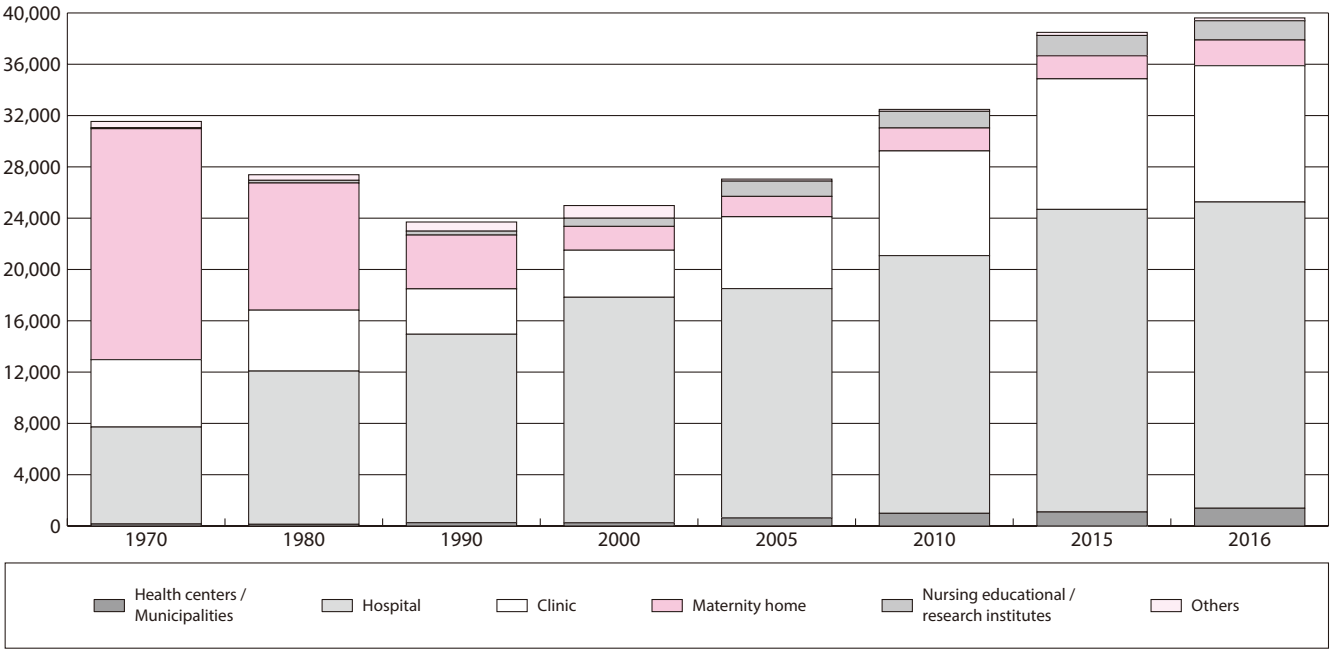
3. Present Status of Midwives

1) Employment of Midwives

<Uneven distribution of employment>

As of 2016, 39,613 midwives are employed. Approx. 60% are employed by hospitals, and approx. 20% by clinics. It is supposed that many of licensed midwives are employed as non-midwife nurses (i.e. public health nurses and nurses), or are not employed at all ("potential midwives").

Table 3: Number of Midwives by Place of Employment



(Prepared by Japanese Nursing Association based on the data of Japanese Nursing Association Publishing Company, "Nursing Statistical Materials"[25])

2) CLoCMiP® and Continuing Education

(1) All-Japan Utilization of CLoCMiP® (Clinical Ladder for Midwifery Practice)

Due to the decrease of child birth, obstetric facilities and maternity wards in both hospitals and clinics are decreasing. This leads to the problem of midwives with less opportunities to attend childbirth and improve their midwifery skills. Under these circumstances, JNA developed the Clinical Ladder for Continuing Education, and published "Guidelines for Applying Clinical Ladder of Competencies for Midwifery Practice (CLoCMiP®)"in August 2013. This clinical ladder categorizes competencies to be evaluated into "ethical understanding", "maternity care ability", and "professional autonomy". The development stages are divided into "Level Novice", "Level I", "Level II", "Level III", and "Level IV" (See the figure 6). The utilization of CLoCMiP® enables both individual midwives and their employer organizations to have shared recognition of midwifery competencies, and to upgrade their skills in a planned and intended manner. At the same time, it enables competency evaluation using the common tool across Japan, thereby achieving the visualization of midwifery competencies. This clinical ladder has been introduced and utilized in many facilities, and are used for continuing education.

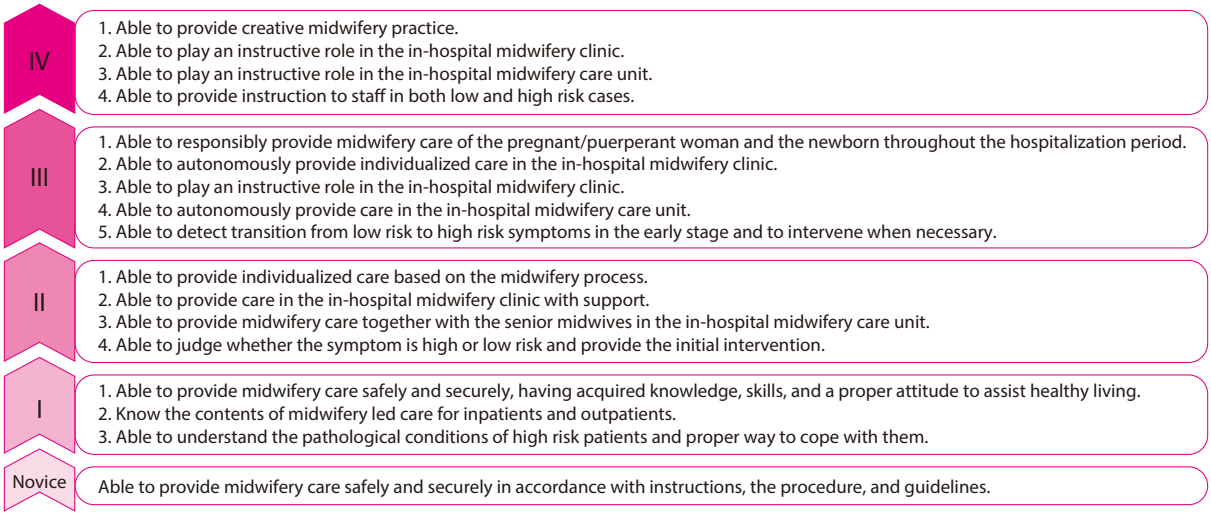


Fig. 6: The required status to achieve each level of Clinical Ladder of Competencies for Midwifery Practice

(2) Certification of "CLoCMiP® Level III Midwife"

As a part of efforts to promote the utilization of CLoCMiP®, a certification system of midwives at "level III" of the clinical ladder was established to objectively certify their midwifery competency based on CLoCMiP®. The system was started in August 2015. This system was collaboratively discussed and established by five associations related to midwifery in Japan (JNA, Japan Midwives Association, Japan Academy of Midwifery, Japan Society of Midwifery Education, and Japan Institute of Midwifery Evaluation). The "CLoCMiP Level III" competency certified by this system refers to ability to perform midwifery with autonomy and independence. Midwives who are certified by passing a document review to prove practical experience required for certification, and an objective examination that questions knowledge, are titled "Advanced Midwives". The title should be renewed every five years.

In Japan, most midwives find jobs in hospitals and clinics. "In-hospital midwifery care" and "in-hospital midwifery clinic" are promoted to enable midwives to provide autonomous care, even in hospitals and clinics where physicians work. Advanced midwives are expected to exercise their competencies as personnel in charge of these functions.

(3) Present Status of Continuing Education

Following the publication of CLoCMiP®, it has been utilized by many facilities, implementing midwife education in accordance with the perinatal medical care functions that individual facilities should perform.

The "Training Guidelines for Newly Graduated Midwives" has been utilized for novice midwives. These guidelines were formulated based on the "Training Guidelines for Novice Nursing Professionals" 1), published by the Ministry of Health, Labour and Welfare in December 2009, because "it was necessary that more facilities should implement training of specified quality, taking into account that training for novice nursing professionals lays the basis for improving the overall quality of nursing force". The JNA guidelines indicate achievement goals for the first year of novice midwives, provide specific examples of annual education plans, and state the necessity of developing instructors. These guidelines are utilized for establishing novice training systems.

While continuing education is mainly implemented by individual facilities, standardized education is increasingly required across Japan, as CLoCMiP® is introduced and the CLoCMiP® Level III certification system is disseminated. On-demand training service has also been started by the Japan Promotional Council for Midwifery Competency, which is consisted of five associations related to midwifery in Japan, enabling students to receive training of the same content anywhere in Japan.[27) 28)]

Table 4: Clinical Ladder for Continuing Education[27)]

			Novice level	Level I	Level II	Level III	Level IV
Maternity care ability	Diagnosis and care during pregnancy, child delivery, puerperium, and newborn period/ Points to be considered during the child delivery period	Information gathering	i) Able to understand information required for healthy living behavior diagnosis and pregnancy progress diagnosis in pregnancy/child delivery/ puerperium/newborn period with support. ii) Able to gather information using the fixed form. iii) Know the lacking information and able to gather the additional necessary information with guidance. iv) Able to record using correct terms and appropriate expressions based on criteria and procedures of midwifery care.	i) Able to autonomously gather information required for healthy living behavior diagnosis and pregnancy progress diagnosis in pregnancy/child delivery/ puerperium/newborn period ii) Know the lacking information and be able to gather the additional information. iii) Able to sort out information required for assessment with guidance. iv) Able to make records using the correct terms and appropriate expressions.	i) Able to gather all information required for implementing individualized midwifery care among the information required for healthy living behavior diagnosis and pregnancy progress diagnosis in pregnancy/child delivery/ puerperium/newborn period ii) Able to sort out information required for assessment.	i) Able to gather information required for healthy living behavior diagnosis and pregnancy progress diagnosis in pregnancy/child delivery/ puerperium/newborn period based on theoretical reasons. ii) Able to gather information in order to conduct assessment taking mental/social aspects and family backgrounds into consideration. iii) Able to sort out the information described in ii) considering needs and priority. iv) Able to gather information intentionally from the relevant persons from different job types.	i) Able to get the picture of overall situation concerning the target including individuality, mental/social aspects, family background, and selectively gather information focused on the required area.
		Assessment/Clarification of problems (needs)	**Low risk** i) Know the normal values of vital signs, various examinations and various physical measurements of pregnant/puerperant women and newborns. ii) Able to understand anatomy and physiology concerning obstetrics. iii) Able to understand the meanings of measured values with support. iv) Able to analyze gathered information of healthy living behavior and the pregnancy progress diagnosis with support. v) Able to understand the pathological conditions of major perinatal disorders.	**Low risk** i) Know pregnant/puerperant women's normal chronological course, and able to understand newborns' physiology. ii) Able to analyze gathered information of healthy living behavior and pregnancy progress diagnosis with support. **High risk** i) Able to understand pathophysiology and examinations of major perinatal disorders (threatened miscarriage/premature labor, hyperemesis, pregnancy hypertension syndromes, gestational diabetes mellitus, and placenta previa) and the risks of multiple pregnancies. ii) Able to understand the proper response to abnormality of pregnant/puerperant women and newborns, and how to assist them.	**Low risk** i) Able to analyze the gathered information of healthy living behavior and the pregnancy progress diagnosis. ii) Able to clarify the needs of pregnant/puerperant women and newborns. iii) Able to decide the priority order of the needs. **High risk** i) Able to clarify problems occurring to the pregnant/ puerperant woman and the newborn. ii) Able to determine the priorities of the problems.	**Low risk** i) Able to clarify the potential needs. **High risk** i) Able to clarify potential midwifery problems. ii) Able to clearly distinguish the midwifery problems from the general problems*.	**Low /high risk** i) Able to give a correct diagnosis considering the risks of the target following the diagnosing process (Able to sort women eligible for in-hospital midwifery care) ii) Able to explain the reasons for the given diagnosis to other midwives and the medical care team members. iii) Able to instruct junior midwives so that they can make a diagnosis following the diagnostic process.
		Diagnosis	i) Able to make an appropriate diagnosis by analyzing information on healthy living behavior and pregnancy progress with support.	i) Able to make an appropriate diagnosis by analyzing information on healthy living behavior and pregnancy progress with support as needed.	i) Able to make an appropriate diagnosis by analyzing information on healthy living behavior and pregnancy progress. ii) Able to consider the priority of problems based on the details of the diagnosis.	i) Able to make an appropriate diagnosis by analyzing information on healthy living behavior and pregnancy progress. ii) Able to set the priorities while considering whether providing midwifery care only is enough, or medical intervention by the physician is required based on the details of the diagnosis.	i) Able to share the given details of the diagnosis with other members of the medical care team including the pregnant/ puerperant woman. ii) Able to give guidance on the details of the diagnosis given and the priorities of the problems. iii) Able to gather required information, do an assessment, make a diagnosis, and set the priorities in a short time during an emergency.
		Planning	i) Able to understand the current conditions and needs of the pregnant/puerperant woman and the newborn. ii) Able to set goals according to the needs of the pregnant/ puerperant women and the newborns with support. iii) Able to make a consistent plan in terms of the conditions of the pregnant/puerperant women and the newborns, the list of their problems, and the goals with support. iv) Able to make a specific plan using the 5W1H framework. v) Able to utilize the midwifery care criteria/standard midwifery plan.	i) Able to set goals according to the needs of the pregnant/ puerperant women and the newborns. ii) Able to make a consistent plan in terms of the conditions of the pregnant/puerperant women and the newborns, the list of their problems, and the goals. iii) Able to make a specific plan using the 5W1H framework. iv) Able to make a midwifery plan with the participation of the pregnant/puerperant women and their family members with support.	i) Able to make a midwifery plan considering the individuality of the pregnant/puerperant women and the newborns. ii) Able to assess and revise the midwifery plan. iii) Able to make a midwifery plan with the participation of the pregnant/puerperant women and their family members.	i) Able to make a midwifery plan considering mental, social, and family conditions of the pregnant/puerperant women and the newborns. ii) Able to make a plan and revise it depending on the conditions. iii) Able to make a midwifery plan with the participation of the pregnant/puerperant women and their family members, and revise it. iv) Able to make a plan including the collaboration with other related health/medical care staff and revise it.	i) Able to make a plan using an appropriate method considering the priorities of the pregnant/ puerperant women and the newborns and their midwifery problems. ii) Able to set appropriate goals (which can be reached/ measured/ assessed) in order to solve the target's problems. iii) Able to play an educational/ instructive role in the process of making a midwifery plan.

		Novice level	Level I	Level II	Level III	Level IV
Practice		i) Able to explain the midwifery practice without fail before starting it. ii) Able to carry out the items to be acquired during the novice midwife training. iii) Able to provide the pregnant/puerperant woman and the newborn with care services according to the midwifery care plan with support. iv) Able to conduct the observations required for treatment and diagnosis and to appropriately report it. v) Able to conduct the indicated tasks correctly and safely following the midwifery care standards and procedures. vi) Able to correctly record the practice carried out following the midwifery recording procedures. vii) Understand how to cope with in an emergency. viii) Call others for help in an emergency. ix) Know what items are required in an emergency and prepare them according to the procedures. x) Able to understand the clinical pathway when using it.	i) Able to explain the midwifery practice without fail before starting it. ii) Able to use the basic midwifery skills with support. iii) Able to provide the targets with midwifery care safely and surely following the standards and procedures according to the midwifery care plan. iv) Able to make records using correct terms and appropriate expressions following midwifery care standards and procedures. v) Able to provide Basic Life Support and Advanced Life Support in an emergency (including neonatal resuscitation). vi) Able to conduct practice following the clinical pathway when using it.	i) Able to carry out midwifery practice according to the midwifery care plan. ii) Able to provide the necessary care considering conditions and responses of the pregnant/puerperant women and the newborns. iii) Able to record new information other than the needs and problems on the list in a timely manner and make an addition or revision to the plan. iv) Able to act properly as a member of the team in an emergency.	i) Able to conduct practices according to the plan while checking the responses of the pregnant/puerperant woman and her family members. ii) Able to play a central role in providing care to the pregnant/puerperant women and newborns in the facility/department overall. iii) Able to play a central role in an emergency. iv) Able to play an educational/instructive role in the in-hospital midwifery clinic. v) Able to conduct activities properly in collaboration with other related health/medical care professionals.	i) Able to exercise creativity and innovativeness in providing midwifery practice. ii) Able to provide nursing/midwifery care with various approaches. iii) Able to cope with an emergency, and take the leadership. iv) Able to play an educational/instructive role at all times. v) Able to support the staff playing an educational/instructive role.
Evaluation		i) Able to accurately report the result of the midwifery care provided by the midwife herself. ii) Able to tell what she did not know during her midwifery practice.	i) Able to ask questions regarding her midwifery practice and solve them. ii) Able to assess the midwife's own midwifery practice on an basis with support. iii) Able to revise the plan for a continuing problem. iv) Able to record the summary of the performed midwifery practice.	i) Able to assess the result of the midwifery care provided by herself on reasonable grounds. ii) Able to assess the extent to which the goal was achieved, and to revise the plan. iii) Able to explain and record the summary of the care provided by herself. iv) Able to assess the variances when using clinical pathways.	i) Able to assess if the midwifery care provided by herself met the needs of the pregnant/puerperant woman and the newborn. ii) Able to make self-evaluation concerning whether she is a good role model for the junior midwives and students.	i) Able to make qualitative/quantitative evaluation of the midwifery care provided by herself. ii) Able to evaluate the midwifery care provided by other staff and give guidance.

4. Midwifery Practice

1) Importance of Care by Midwives

Midwives must respect the wishes of the pregnant women and their families, and support them so that they can enjoy safe, secure and comfortable pregnancy, delivery and puerperium, and successfully transit to parenthood. Therefore, midwives must be able to make accurate diagnosis and offer appropriate care, and empathetically share both joy and sorrow together with their patients.

In addition, besides supporting women during delivery, with respect for women's reproductive health rights, it is vital that midwives continue to provide comprehensive measures to support women's health throughout their lifetime.

JNA is developing a project with an aim to "providing midwifery care to all pregnant women, those in the puerperium, and newborns." As part of this project, the "Guidelines for Applying a Practical Midwifery Competency Ladder (Clinical Ladder)" was developed in 2013, as a tool for midwives to evaluate their own midwifery capacity. Using the tool, midwives can objectively evaluate their own midwifery experience, and understand their own level on the Clinical Ladder. This is an innovative tool that enables standardized evaluation of midwives in Japan, making contribution to skill upgrading of midwives. In 2016, JNA sorted out women's health care abilities that are required for midwives into 11 items, and conducted a status survey on delivery facilities. The survey results indicated that all of these items were implemented, though women's health care that midwives could experience varied among delivery facilities. To enable all midwives to upgrade their women's health care abilities in an intended and planned manner, JNA indicated career paths for midwives and the course for upgrading women's health care, taking into account the nursing and midwife education courses, and present status and requirements in perinatal medical care, in Japan.

The upgrading of standardized competency by midwives lead to the provision of standardized midwifery care to all pregnant, postpartum and puerperal women and their families.

2) Roles of Midwives in Re-modeling of Perinatal Medical Service System

Ahead of measures by the national government, JNA has promoted in-hospital midwifery care and in-hospital midwifery clinic in order for midwives to exercise their specialized skills, for the purpose of establishing safe and secure childbirth environment, despite decrease in delivery facilities due to shortage in obstetricians.

The Notification from the Director-General of the Health Policy Bureau in 2007, "Division of Roles and Collaboration among Physicians, Midwives, Nurses and Other Professionals in Delivery" (March 30, 2007, Health Policy Bureau No. 0330061), and "Promotion of the Division of Roles among Physicians, Healthcare Professionals, and Clerical Staff" (December 28, 2007, HPB No. 1228001), promoted the division of roles between physicians and midwives, and the exercise of specialized skills of midwives. Subsequently, the government published the "Vision for Securing Safe and Desired Medical Care" (June 2008, MHLW), "Meeting concerning the Establishment of and Collaboration in Perinatal Medical Care and Emergency Care: Report" (March 4, 2009, MHLW), and "Promotion of Team Care" (March 19, 2010, MHLW), thereby promoting in-hospital midwifery care and in-hospital midwifery clinic. In response, the "Guidelines for In-hospital Midwife-Led Care: Collaboration between Physicians and Midwives" were formulated, but the number of newly opened in-hospital midwifery care mostly remains at the same level.

However, the circumstances that surround the perinatal period have been changing. While the number of live births is declining, deliveries by women aged 35 years or older take up approx. 30% of all, resulting in the higher ages of mothers, and increased risks of pregnancy-induced hypertension and gestational diabetes mellitus. Expectations are also rising for intervention by midwives starting in the pregnancy period, due to perinatal mental health concerns, child abuse, and other problems.

Medical institutions are increasingly required to provide necessary care for pregnant and postpartum women, in accordance with their risks, through collaboration between midwives and physicians.[29)]

3) Promotion of In-Hospital Midwife-Led Care and In-Hospital Midwifery Clinic

Ten years have passed since the formulation of the "Guidelines for In-hospital Midwife-Led Care: Division of Roles and Collaboration between Physicians and Midwives" (hereinafter referred to as the "Guidelines") in 2008. When the Guidelines were formulated, operational burden on physicians was a serious problem in the medical settings. In-hospital Midwife-Led care and in-hospital midwifery clinic were promoted to proactively utilize the midwifery force in the perinatal period, in order to relieve operational burden on obstetricians, and to respond to diverse needs of pregnant, postpartum and puerperal women. In the meantime, the "work style reform" that is currently promoted by the national government indicates long working hours as one of the problems. By profession, the share of employees who work for more than 60 hours per week is the highest among physicians at 41.8%. In particular, the share of full-time physicians employed by hospitals who work for 60 hours or longer per week is higher in Obstetrics (53.3%) than in other clinical departments. It is required to establish in-hospital Midwife-Led care and in-hospital midwifery clinic, in order to promote team care where obstetricians and midwives can cooperate and collaborate, toward the resolution of urgent problems concerning increase in high-risk pregnant and postpartum women and mental health care in the perinatal period.

Under these circumstances, JNA reviewed the Guidelines for the first time in ten years, and formulated the "Guidelines for In-hospital Midwife-Led Care 2018" (hereinafter referred to as "Guidelines 2018"). Because in-hospital Midwife-Led care and in-hospital midwifery clinic are established in medical institutions capable of emergency response, the Guidelines 2018 strongly recommend that midwives should be engaged in all pregnant and postpartum women, and work in collaboration with obstetricians in support for high-risk pregnant and postpartum women, rather than dividing roles based on risk levels (i.e. high-risk pregnant and postpartum women handled by obstetricians, and low-risk by midwives).

Definition of "In-Hospital Midwife-Led Care"

A system where midwives provide midwifery care to pregnant and puerperal women, respecting their and their family's intention, while recognizing normality and abnormality from pregnancy through to the first puerperal month, in a medical institution capable of emergency response

*In these Guidelines, the term "in-hospital maternity home" was replaced with "in-hospital midwifery care," because the former term was suggestive of a "maternity home" under the Medical Care Act, implying the handling of only normal deliveries and the necessity of establishing a dedicated facility. To avoid this, the term "in-hospital midwifery care" was introduced. In the latest definition, the period of providing care to pregnant and puerperal women was indicated.

Definition of "In-Hospital Midwifery Clinic"

A system where midwives divide roles with obstetricians, and undertake health checks and healthcare guidance for pregnant and puerperal women, respecting their and their family's intention, in a medical institution capable of emergency response; This excludes cases where obstetricians undertake health checks, while midwives only undertake healthcare guidance and breastfeeding outpatient care.

*In these Guidelines, the term "in-hospital midwifery clinic" was introduced, so that it would be clear to pregnant and puerperal women, and other target audience, that the outpatient clinic was led by midwives. The latest definition also indicated that obstetricians and midwives would collaborate and cooperate with target persons at the center.

Room for In-Hospital Midwife-Led Care

4) "Handbook for Introducing Unit Management of a Mixed-Divisions Ward for Maternity and Other Patients"

The number of child delivery facilities is decreasing, partly due to the decrease in the number of children born and the lack of obstetricians. Medical institutions handling fewer cases of child delivery are forced to hospitalize maternity patients with patients from different divisions in the same ward ("Mixed-divisions ward"). Accordingly, newborns are facing a higher risk of infection. JNA formulated a "Handbook for Introducing Unit Management of a Mixed-Divisions Ward for Maternity and Other Patients" in September 2013, and it suggests that the staff should form isolated clusters to take care of maternity patients in the mixed-divisions ward.

The status survey conducted by JNA in 2016 showed no substantial difference from the previous survey in 2012. However, the share of midwives in mixed-divisions wards who never took take care of patients from other divisions decreased from the previous survey in 2012, while the share of midwives who simultaneously took care of postpartum women and patients from other divisions significantly increased. It is required to undertake further dissemination activities to improve the provision of childbirth environment.[30)]

"Handbook for Introducing Unit Management of a Mixed-Divisions Ward for Maternity and Other Patients"[31]

5) The System Implementation at Facilities

The Guidelines 2018 stipulate that the scopes of practice for in-hospital midwifery care and in-hospital midwifery clinic should be specified through consultation between obstetricians and midwives, in accordance with the functions of the medical institutions and local needs. Midwives who provide care during pregnancy have the roles to undertake the management of mothers, provide comprehensive support based on their familial backgrounds and living environments, and request necessary support from related professionals and in necessary periods, so that mothers, children, and their families can live a safe and secure life in their local communities.[33]

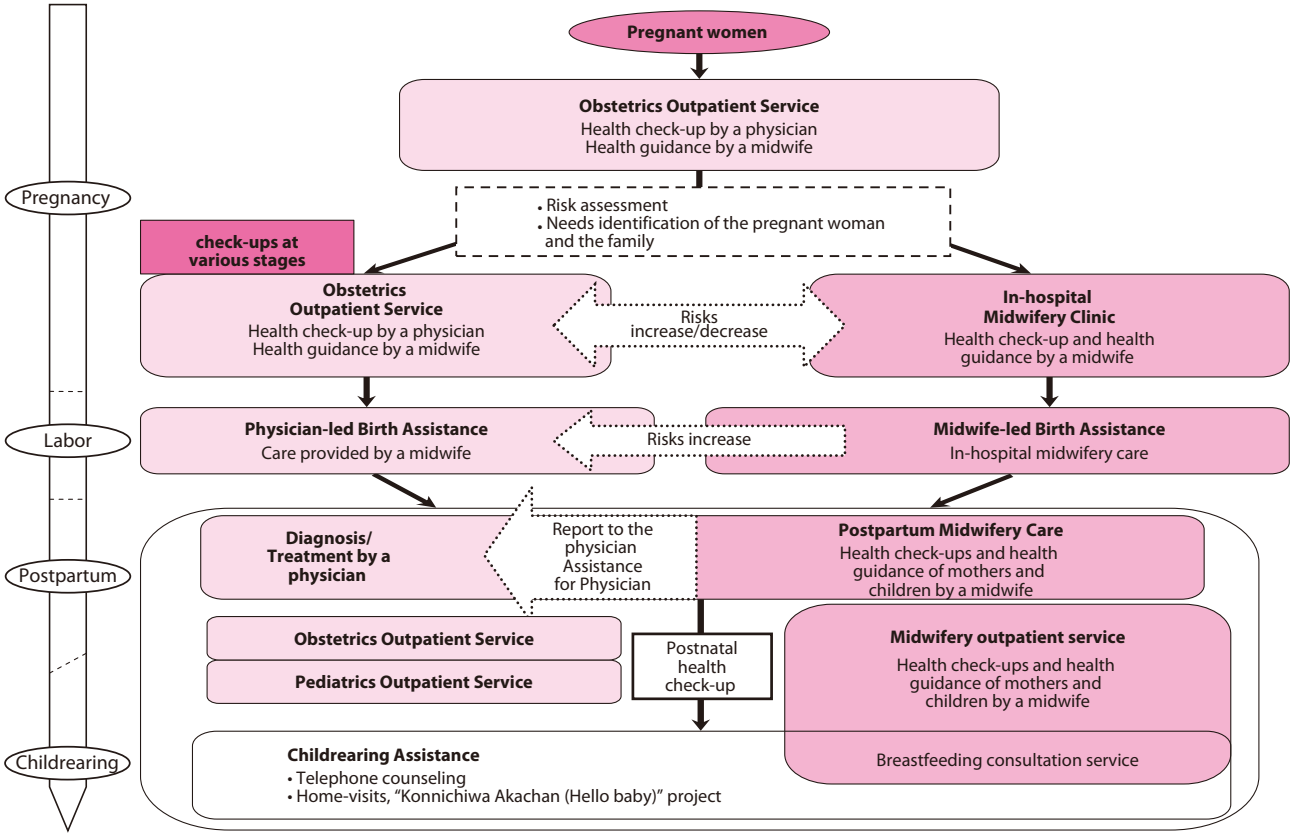


Fig. 7: Risk-based Obstetric Care System

(MHLW research grant (special research project), co-investigation report "Guidelines for In-hospital Midwife-Led Care: Dirision or Roles and Collaboration between Physicians and Midwives" by Masao Nakabayashi, Co- investigator, 2009)[32]

Ⅲ. Recent Topics Requiring Special Attention

1. "Guide for Protocol Development for Delivery Facilities During Disasters"

In order to share the lessons learnt from the Great East Japan Earthquake in 2011, JNA visited the affected areas and conducted an investigation to grasp the conditions of the delivery facilities of the affected areas. Survey results of the delivery facilities suggested that only a few facilities had manuals for dealing with child delivery during disasters, and only manuals for the entire hospital were prepared.

JNA prepared the "Guide for Protocol Development for Delivery Facilities During Disasters" in 2013, and has made broad efforts for dissemination and awareness improvement, so that manuals would be prepared by more delivery facilities, and training would be implemented on a facility, local community, and prefectural basis.

In the meantime, it was pointed out that a pediatric and perinatal medical care systems should be established during normal times, so that such systems would be functional in the event of a Great East Japan Earthquake. In response, pediatric and perinatal liaisons for disasters have been developed, and the Japan Society of Obstetrics and Gynecology has developed a large-scale disaster information system, as a perinatal version of the wide-area Emergency Medical Information System (EMIS) utilized by DMAT.

Following the Kumamoto earthquake in 2016, a hospital that had the advanced perinatal care functions of Comprehensive Perinatal Medical Center was afflicted for the first time. The pediatric and perinatal liaisons and the large-scale disaster information system were utilized, and their effectiveness was confirmed.

In response, under the 7th Medical Care Plan, the "Policy concerning the Establishment of Medical Care System at Disasters" included provisions concerning pediatric and perinatal liaisons at disasters, and business continuity plans (BCP) against disasters.[34) 35)]

2. Temporary Transfer System of Midwives

JNA proposes a temporary transfer system of midwives as a system that contributes to correcting the uneven distribution of midwives, and possibly strengthening midwives' practical skills.

In the temporary transfer system of midwives, a midwife is transferred to a remote facility as a midwife for approximately half a year to one year while being under the employment contract with the original employer. In addition to amending the uneven distribution of midwives, the system can contribute to the local community by providing midwifery care to all pregnant/postpartum women in need. Strengthening midwives' practical skills through practice in normal child delivery assistance is another one of the system's objectives.

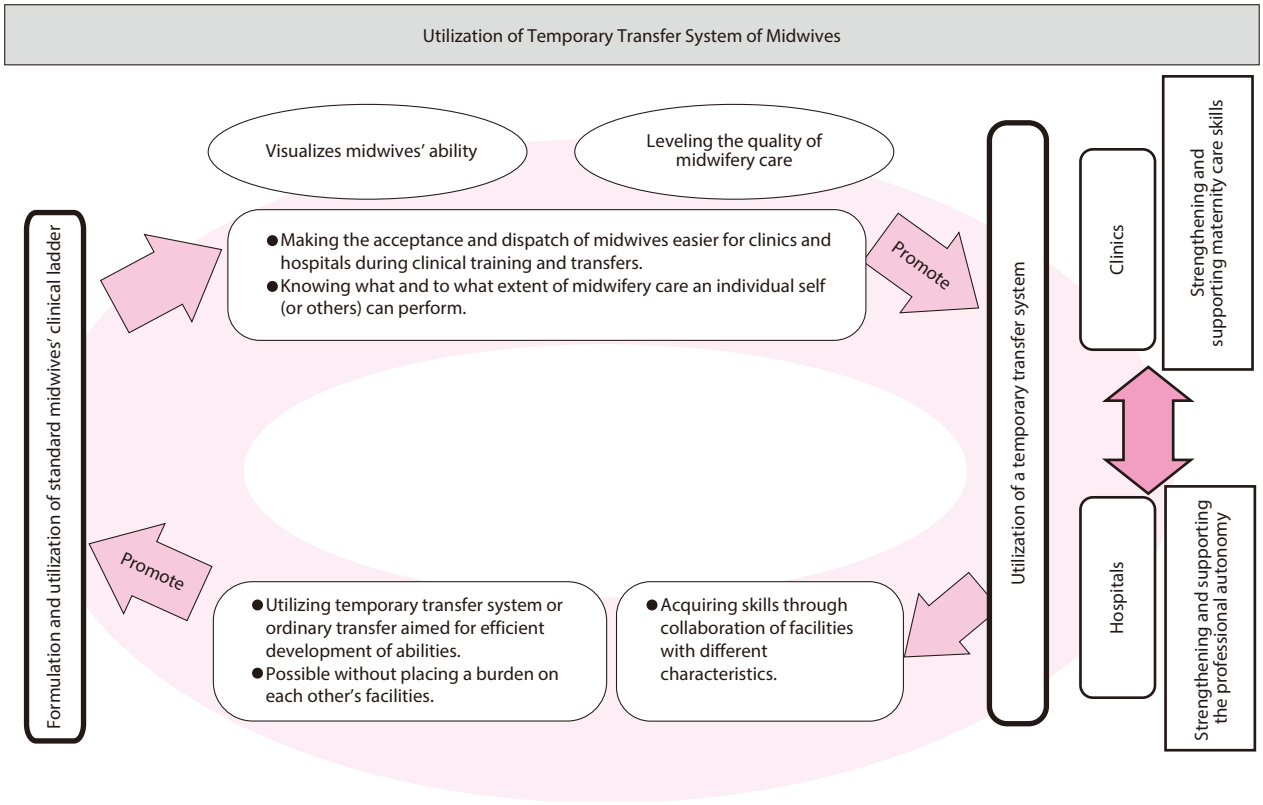


Fig. 8: Utilization of Temporary Transfer System of Midwives

(Prepared by Japanese Nursing Association)

3. Pregnancy and Diseases

1) Gestational Diabetes Mellitus

Since the International Association of Diabetes and Pregnancy advocated the global criteria for diagnosing gestational diabetes mellitus in 2009, the definition and diagnostic criteria for gestational diabetes mellitus were also revised in Japan in July 2010.

The introduction of the new diagnostic criteria is said to have increased the incidence of gestational diabetes mellitus 4-fold, from 2.92% to 12.08%. Considering the risks of gestational diabetes mellitus on the fetus, however, the new diagnostic criteria are important for safer perinatal management of the mother and child. Since midwives are professionals who can provide appropriate assistance during each period of pregnancy, they can promote both maternal health as well as the health of the babies to be born, making their contribution to society significant.

2) HTLV-1 (Human T-cell Leukemia Virus Type 1)

"HTLV-1" is considered a virus to cause adult T-cell leukemia, HTLV-1-associated myelopathy, and other diseases. Although the presence of the virus is not necessarily accompanied by visible symptoms, one in every 1,000 persons develops adult T-cell leukemia. In Japan, approximately 1% of the population are said to be carriers of the virus.

It was found that when a mother has HTLV-1, her baby can also be infected with HTLV-1 through breast milk. The possibility of infection in case of long-term breast feeding is 15% - 20%, and even for babies who are not breastfed a possibility of infection is approximately 3%. Although a preventive method of freezing breast milk at -20°C before feeding has been proposed, there are still no absolute preventive measures.

In Japan, the HTLV-1 Antibody Test has been added to the standardized test items of health check-ups for pregnant women since 2012. Accordingly, there are women who find out that they are carriers for the first time when they are pregnant. Midwives are expected to provide HTLV-1 carrier mothers with various assistances, including consultation on feeding methods and supporting their mental health.

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