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Conflict of Interest

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The role of maternal and child health (MCH) handbook in the era of sustainable development goals (SDGs)

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ABSTRACT

The maternal and child health (MCH) handbook was published for the first time in Japan in 1948. The MCH handbook was born in Japan but is being developed and adapted around the world. MCH handbook programs have been introduced in more than 50 countries and areas. The MCH handbook is not an end goal but a starting point. It is not a tool that can directly reduce maternal and child deaths. However, it can increase knowledge and change MCH related behaviors through strengthening communication between health professionals and mothers with children. It can be utilized as a basic tool for ensuring the quality of lives of mothers, children and families around the world. Many of the MCH handbook's innovative roles also fit well within the context of the sustainable development goals which were adopted by the United Nations in 2015. In 2018, there were 2 important messages; World Health Organization recommendations on home-based records for maternal, newborn and child health and World Medical Association statement on the development and promotion of MCH handbook. MCH handbook is an indispensable tool in our efforts to crystallize the idea of leaving no one behind. Each country has its own culture and customs. We should respect the worth of each culture, share good practices and lessons learned, and promote the use of MCH handbooks for the benefit of larger numbers of people.

Keywords: Mother; Child; Home; Continuum of care; Japan

WHAT IS MATERNAL AND CHILD HEALTH (MCH) HANDBOOK?

The MCH handbook was published for the first time in Japan in 1948. Now pediatricians, obstetricians, public health nurses, and midwives may write down medical records in MCH handbook. Parents bring MCH handbooks to clinics for health examinations, immunizations, or treatment. The coverage is almost 100% in Japan. Most parents keep MCH handbooks until their children are married.¹

MCH Handbooks contain health records—both of the mother and her child—plus information on pregnancy, delivery and child health in just 1 booklet. MCH Handbooks are given to the family. Parents keep their MCH handbook at home. Doctors, nurses, or midwives enter medical records into the handbooks, and parents manage these records by themselves.

The role of home-based records is different from that of medical records kept at hospitals. MCH Handbooks can be used as a guide to pregnancy and child-rearing. MCH handbooks provide essential health information on high-risk pregnancies, delivery, childhood diseases, child growth and development, and immunization.

MCH HANDBOOK STARTED IN JAPAN

In 1948, Boshi Techo (handbooks for mothers and children) were distributed by the Japanese Ministry of Health and Welfare for the first time in the world (**Fig. 1**). At that time MCH was one of the political issues, because high infant mortality (61.7/1,000 births), high maternal deaths and many patients with infectious diseases such as tuberculosis, dysentery, diphtheria and polio. The 20-page handbook consisted of medical records on maternal care, delivery, and child health checkups. Six pages were dedicated to recording the distribution of milk and clothes during post-war rationing. Midwives and public health nurses played a major role in the promotion of the handbook, and its coverage reached almost 100%.¹

In 1965, the Boshi Kenko Techo (MCH handbook) was distributed to all pregnant women under the MCH Act. Information on maternal care and child-rearing, along with a space to be filled in by parents, were added to the 46-page revamped handbook.

In 1950, the infant mortality rate (IMR) in Japan was about twice that of the US. However, by 1964, the IMR in Japan had dropped below that of the US, despite the fact that Japan was still a relatively poor country. A joint Japanese and American research team concluded that Japan's low IMR could be attributed to a combination of 5 factors: its narrow socio-economic distribution, the high value placed on child bearing, its national health insurance system, population-based screening and health check-ups, and the use of MCH handbooks.²

Fig. 1. MCH handbook published in 1948 in Japan. The cover page of the first version of MCH handbook. MCH = maternal and child health.

From 1991, MCH handbooks started to be distributed by municipalities, towns or villages, in accordance of decentralization, and in the MCH handbook was again updated. The revised national version consisted of 48 pages, but local governments could add further information based on their own local needs.¹

In 2012, the 2002 national version was amended and information on high-risk pregnancy, a stool color chart for the early detection of biliary atresia, and discussion of male partner participation were added to the handbook. Today, because the number of newborns has decreased drastically in Japan, psychosocial support for childrearing has become one of the most critical issues and needs special attention.

MCH HANDBOOK IN THE WORLD

MCH handbooks are adapted around the world. MCH handbook programs were started in other countries thanks to the support of United Nations Children's Fund, the Japan International Cooperation Agency, non-governmental organizations and several other organizations. They were inspired by Japan, a country that was able to reduce its IMR before achieving economic development or being able to use technologically advanced medicine.¹

There are a wide variety of programs aiming to improve maternal, neonatal and child health in many countries in Asia and Africa. Interventions have been carried out at different times, in different places, by different healthcare workers, and have been run by many donor organizations. Although in most countries it can be very difficult in reality to ensure a continuum of care across time and location, the introduction of the MCH handbook program can help to ensure such a continuum of maternal, neonatal and child health care (**Fig. 2**).

Parents can get appropriate information easily and understand how they should care for their children, because they can rely on the handbook's continuous guidance from pregnancy to childhood. MCH handbooks have been produced in various colors and different sizes in many countries and areas. The MCH handbook was born in Japan but is being developed and adapted around the world. To date, MCH handbook programs have been introduced in more than 50 countries and areas. The development of an MCH handbook has many stages, ranging from the pilot stage to nationwide coverage.

ADVANTAGES OF MCH HANDBOOKS

MCH handbooks help service providers and users to understand what a comprehensive MCH service entails.

Fig. 2. MCH handbook for a continuum of care.
MCH = maternal and child health.

Parents, health volunteers and health professionals can share knowledge and information on maternal health and child growth. The MCH handbook can promote communication and coordination among them. Mothers who used MCH handbook during pregnancy had higher level of knowledge than those who did not use.³ This is very important in countries and areas where many people consider that pregnant women do not need to attend health facilities during pregnancy, because they think that pregnancy is not an illness.

MCH handbooks are flexible. Their contents can be edited according to a country or region's culture and its socioeconomic status.¹ We strongly recommend developing MCH handbooks based on the charts, posters and guidelines of the target country instead of merely translating the MCH handbooks used in Japan. The number of pages in each handbook can also be adapted depending on the budget available.

The MCH handbook itself cannot directly decrease IMR and maternal mortality ratio, but the MCH handbook program may contribute to a change in the behavior of mothers, encouraging a better relationship between health professionals and mothers and leading to the improvement of maternal and child care.^{4,5}

CHALLENGES FOR MCH HANDBOOK PROGRAMS

MCH handbooks may also be perceived as having some disadvantages, depending on the situation of countries and regions. First, printing the MCH handbook is more expensive than printing 1 health card. However, when more than 3 kinds of cards are printed, the cost of printing of an MCH handbook is cheaper.

When a handbook is lost, all the records are lost. While the rate of loss for handbooks is lower than that for single cards, we also need to take into account unexpected conditions that may occur, such as natural disasters and civil war. By applying information communication technology (ICT), the utilization of both analog and digital versions of the MCH handbook should be considered in order to integrate the handbook with digital information on MCH.

The MCH handbook should be distributed to all mothers, leaving no one behind. When aimed at parents with low levels of education, the contents should be adapted to include many illustrations and figures, as well as photos with simple messages.

THE INNOVATIVE ROLES OF THE MCH HANDBOOK IN THE ERA OF SUSTAINABLE DEVELOPMENT GOALS (SDGs)

The MCH handbook per se is not an end goal but a starting point. It is not a tool that can directly reduce maternal and child deaths. However, it can increase knowledge and change MCH related behaviors through strengthening communication between health professionals and mothers with children.⁶

It can be utilized as a basic tool for ensuring the quality of lives of mothers, children and families around the world. Many of the MCH handbook's innovative roles also fit well within

Table 1. Sustainable development goals

No.	Goal 3. Ensure healthy lives and promote well-being for all at all ages
1	MMR < 70 per 100,000 live births
2	NMR < 12 per 1,000 live births Under-5 mortality < 25 per 1,000 live births
3	AIDS, tuberculosis, malaria, and neglected tropical diseases
4	NCD
5	Substance abuse, including narcotic drug and alcohol
6	Global deaths and injuries from road traffic accidents
7	Sexual and reproductive health-care services
8	Universal health coverage
9	Hazardous chemicals and air, water, and soil pollution

MMR = maternal mortality ratio; NMR = neonatal mortality rate; AIDS = acquired immune deficiency syndrome; NCD = non-communicable diseases.

the context of the SDGs which were adopted by the United Nations in 2015 (**Table 1**). The intervention of MCH handbook in Cambodia was to increase antenatal attendance, delivery with skilled birth attendants, delivery at a health facility, and maternal knowledge.⁴

In summary, the roles for MCH handbook include the following:

- 1) To leave no one behind: “No one left behind” is one of the philosophical foundations of the SDGs. The MCH handbook is recognized as a tool for improving the social inclusion of persons with disabilities, refugees, migrants, ethnic minorities, and the poor.⁷
- 2) To ensure a continuum of MCH care: MCH handbooks can strengthen a continuum of care within the fields of maternal, neonatal, and child health. They can also be extended to cover the health of children of school age.⁶
- 3) Promoting a harmonized mélange of care within many health fields: The MCH handbook is a book of all in one. Information from many health fields, such as MCH, immunization, infectious diseases, nutrition, family planning, etc., are integrated into 1 book.⁵
- 4) To offer a flexible tool that can be adapted to each country's needs and culture. The MCH handbook is very flexible and user friendly, because it is easy to add color pages and illustrations, figures, and photos when needed, or to reduce the number of pages due to financial constraints.¹
- 5) To empower women: MCH handbooks can empower women by delivering their own health information into their hands. They can also strengthen communication between health professionals and mothers. The MCH handbook is a personal keepsake; it contains a record of the childrearing efforts carried out by mothers and fathers.⁴
- 6) To apply ICT to MCH handbook: The digital MCH handbook is useful to low educated people and visual defect. It is expected to integrate the information of MCH handbook and the digital MCH services by utilizing ICT.⁷

INTERNATIONAL CONFERENCE ON MCH HANDBOOK

The international conference on MCH handbook started with 5 countries at Tokyo in 1998, when only 5 countries (The Netherlands, Thailand, South Korea, Indonesia, and Japan) in the world had MCH handbook program. The purposes of the international conference were to exchange the experiences of implementing MCH handbook programs and to discuss the good practices and lessons learned for future development. The international conference has been held nearly every 2 years to strengthen the network among health professionals contributing MCH handbook programs in Asia and African countries.

The 11th International Conference on MCH handbook was held at Bangkok in Thailand on 12–14 December 2018. The conference was organized by Ministry of Public Health, Thailand and International Committee on MCH handbook. There were 447 participants from 29 countries from Asia, Africa, Europe and America. There were many fruitful discussions under the theme “The Miracle of the First 1,000 days for SDGs; MCH handbook as a family-based tool” in the presence of Dr. Her Imperial Highness Princess Akishino of Japan.⁷

In the conference, 2 new global strategies were introduced. One is World Health Organization recommendations on home-based records for maternal, newborn, and child health in September 2018.⁸ There are so many improvements of home-based records and the scientific proof of advantages of MCH handbook is requested.

The second excellent news is a World Medical Association (WMA) statement on the development and promotion of MCH handbook on October 2018.⁹ The WMA recommends that the constituent member associations and medical professionals promote the adaptation to local setting and the utilization of MCH handbooks, or equivalents, in order to leave no one behind with respect to SDGs, especially for non-literate people, migrant families, refugees, minorities, people in underserved and remote areas.

In the end of the conference, the MCH handbook Bangkok Declaration was agreed. The MCH handbook is an essential and effective family-based tool that can promote continuum of care for all mothers and children, especially during the important first 1,000 days of life. The MCH handbook should promote early child development to ensure well-being throughout the course of life.⁷

FUTURE DEVELOPMENT IN THE ERA OF SDGS

MCH handbook is an indispensable tool in our efforts to crystallize the idea of leaving no one behind in the era of SDGs. Each country has its own culture and customs. We should respect the worth of each culture, share good practices and lessons learned, and promote the use of MCH handbooks for the benefit of larger numbers of people. We hope strongly that the MCH handbook will contribute to the happy and healthy lives of mothers, children and families around the world!

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