The Perinatal Care System in Japan

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The Perinatal Care System from the Perspectives of Patients and the General Public

Three spheres

From the standpoint of Japanese healthcare providers, the "perinatal care system" refers to the secondary and tertiary perinatal emergency care systems established in each prefecture. However, what is important for the general public is how effectively not only the system between pregnant women and healthcare providers in emergency situations, but also the overall system for perinatal care provision—under which the pregnancies and deliveries of normal pregnant women are managed, with the women being provided with care in their communities as well as high-level medical care as required—is functioning. In this area, many cases have been reported in the mass media as "accidents" and become social problems. These wide-ranging problems include "pregnant women without prenatal care" related to the accessibility to primary obstetric facilities; "delivery refugees" due to a shortage of low-risk delivery facilities; and patients being "passed around" from hospital to hospital due to problems with access to high-level medical institutions. This paper discusses the issues currently faced by Japan's perinatal care system, dividing them into three spheres: zero-level (pre-hospital), primary, and advanced services.

Four perspectives

When considering the provision of healthcare services, the terms "safety" and "reassurance" come up as keywords. In reviewing the perinatal care system, it is necessary to add terms of "access" and "costs and benefits." Perinatal care is an indispensable part of the social framework. The general public requires the provision of appropriate medical care anywhere, any time. A secure system of collaboration with advanced medical institutions under the stable social and economic basis is also required. As the past experiences have frequently shown, healthcare providers must fully expect that cases that run contrary to these expectations could produce huge social issues. This paper will examine the problems faced by Japan's perinatal care system in the three spheres from these four perspectives represented by the keywords above.

The Zero-level (pre-hospital) Perinatal Care System

Reassurance/access

The issue of the "information-disadvantaged": Public services, public support, and the provision of information related to these belong to this area. Because public education in Japan is still inadequate in conveying basic common knowledge about the social security system and public support, measures by local governments need to address the issues of so-called "information-

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disadvantaged" people or people isolated from society who can not receive public services which they are rightly entitled to.

Pregnant women without prenatal care: Japan has an excellent prenatal checkup system, under which care begins when a woman is issued with her Maternal and Child Health Handbook. However, around 0.3% of pregnant women do not undergo regular prenatal checkups. This results in their "running directly" to a birthing facility when labor begins. Financial issues are the main reason for these women. In many such cases, the woman gives birth with pregnancy complications that had not detected or treated, resulting in an extremely high frequency of perinatal complications such as preterm deliveries, low-birth weight infants, and perinatal death. Because many of these women are uninsured and/or on welfare, around 40% of them do not pay the delivery expenses.[1] These women are economically and socially vulnerable, and so measures to resolve this issue need to be established from an administrative perspective.

At present, information is provided through such channels as the mass media and educational activities, but so far, these efforts have been sufficiently effective.

Safety

Problems due to the lack of primary emergency care system: In Japan, very limited areas provide obstetric primary emergency medical care at night or on holidays. Some prenatal checkup facilities cannot be contacted by telephone outside of business hours, so that in an emergency situation even women who have been undergoing regular prenatal checkups may find themselves in the same position as women who have had no prenatal care (the issue of women without prenatal care cannot simply be said to having no relation to the healthcare system on the grounds that it is a problem concerning the socioeconomic status of the patient and thus lies in the welfare sphere). Especially in the first trimester —when miscarriages and ectopic pregnancies are most likely to occur—emergency medical care is essential for many pregnant women. However, since such cases are few in number, establishing emergency care systems in each secondary medical region is not cost-effective. There is a need for emergency systems covering wider areas to be established in the future.

Need for a system for pregnant women without prenatal care: Pregnant women without prenatal checkups are a medically high-risk group. Since it is difficult for primary birthing facilities to respond to them, they must be accepted and treated by mainly large hospitals and perinatal centers, which are able to handle emergencies. Since most pregnant women receive prenatal checkup in obstetric facilities in Japan, perinatal emergency system is established basically on clinic to hospital, or doctor to doctor relationship. Therefore, when a pregnant woman is transported from a primary birthing facility to the perinatal center by ambulance in an emergency situation, a medical risk assessment has already completed by her attending physician. To the contrary in the case of a woman who has had no prenatal care, coordination with the public ambulance service is imperative, as it is with a general emergency.

One means of rectifying this situation would be to establish a coordinated system for sharing information between general emergency systems and perinatal emergency systems to enable ambulance teams with pregnant women without prenatal care to better determine to which medical facilities the patient should be transported. Another possibility would be to integrate the perinatal emergency information system itself into the general emergency information system. Efficient measures tailored to the actual situation in each region need to be considered. There is a high incidence of women who receive no prenatal care giving birth at home or in an ambulance. A systematic training system needs to be established to ensure that ambulance teams are able to deliver babies.

Benefits/economic perspective

Obstetrical/gynecological primary emergency care: Due to the small number of emergency cases that occur, establishing obstetrical/gynecological primary emergency care systems in individual municipalities is not realistic. Since similar problems can also be envisaged for other specialized fields of emergency medicine, a framework for establishing a wide-ranging primary emergency system needs to be considered urgently.

Expansion of prenatal checkup subsidies as a means of addressing the problem of pregnant women without prenatal care: When cases of women without prenatal care dying in childbirth

became a social problem, significant expansion of prenatal checkup subsidies was suggested as a means of addressing the problem, and increased subsidies were implemented in 2009. Women without prenatal care comprise no more than approximately 0.3% of pregnant women in Japan, and the majority of these women give birth in regional base hospitals. While the expansion of prenatal checkup subsidies is good news for all pregnant women and is regarded as an effective measure for women who limit the number of prenatal checkups due to financial reasons, but the effectiveness of this measure, including as a means of addressing the problem of pregnant woman who receive no prenatal care, needs to be verified in the future. There have been no reports of a clear decrease in the number of women without prenatal care. In fact, what medical professionals desire is measures to address the problem of accrued debt that inevitably occurs when hospitals admit women without prenatal care. The burden on ambulance teams would be significantly alleviated if local government agencies were to shoulder these accrued debts.

The Primary Perinatal Care System

Reassurance

Ensure to meet with diversified needs from the patients: Pregnant women have diverse needs. Many pregnant women have an extremely deep-rooted desire to give birth in their own community in a birthing style they have decided for themselves at a facility that allows a wide range of birth plans, watched over by their family. This attitude probably stems from traditional Japanese childbirth style (the existence of a large number and diverse range of small-scale birthing facilities based on the medical treatment at the patient's own expense). Although from a health-care standpoint, it is sometimes difficult to balance these needs with the securing of patient safety, society's strong responses to the decrease in the number of birthing facilities in Japan in the past few years have shown that the general public desires that such a system be maintained.

Urgent need for measures to address the shortage of midwives: Although there is no evidence that thorough care by midwives during pregnancy and childbirth raises the efficiency of delivery, it does enhance the satisfaction of pregnant women and is also thought to be beneficial in the formation of good mother-child bonds. In 1955, Japan had approximately 55,000 midwives. By the 1970s, this number had roughly halved, and by around 1990 the number had further dropped to approximately 23,000. Since then, the number has been gradually increasing (27,789 midwives in 2008). However, this number is 8,000 short of the number of midwives that is required. A shortage of midwives at birthing facilities, especially clinics, is the norm. This situation was inevitable since only an extremely small number of midwives were trained between the 1950s and 1980s, a result stemmed from a serious error in nursing policy. Policy inducement is needed to ensure the rapid expansion of midwife training and that midwives are assigned appropriately to delivery facilities.

Access

The number of birthing facilities—at both hospitals and clinics—continues to decrease across the board, and the access to delivery facilities has become more inconvenient for pregnant women. The reduction and consolidation of birthing facilities is an unavoidable situation brought about by the decrease in the actual number of births as well as the need for improved safety during delivery. Addressing the measure of deteriorating access is a major administrative issue for the future.

Safety

The current perinatal care system is based on the concept of ensuring that patients are smoothly referred and transported to advanced medical facilities when necessary through the construction of a close network between small-scale birthing facilities in local communities and regional base hospitals/perinatal centers. Carrying out risk assessments of pregnant women in advance is expected to considerably lighten the burden on the system. Except in maternal emergency cases, the system for transporting patients to advanced medical facilities in emergencies is thought to essentially work well. An issue that remains is the handling of emergency caesarean sections, which can unavoidably occur even in low-risk deliveries (even with low-risk deliveries of full-term babies, it is in reality impossible to prevent some emergency cases, such as an umbilical cord prolapse, for which there is too little time for the patient to be transported to a hospital). The number

of births per facility at clinics is also increasing annually (from 238 in 1996 to 361 in 2008). Enhancing the emergency response capabilities of facilities by increasing staff numbers (in-house response) and creating networks with nearby obstetrical and gynecological facilities (coordination between clinics) are required.

Benefits/economic perspective

Childbearing at the patient's own expenses: A major characteristic of childbirth in Japan is that approximately half of all deliveries are performed at clinics with beds. With the significant shortage of midwives, the diverse needs of pregnant women have been satisfied by this system while simultaneously forming the foundation for a safe perinatal care system, as clearly indicated by Japan's low perinatal mortality rate—one of the lowest in the world—and low maternal mortality rate. In Japan, small-scale facilities are dispersed throughout a region and obstetrical specialists in each facility see individual pregnancies and deliveries from start to finish. This system has developed on the premise that normal deliveries are basically reimbursed totally by the patient, not from the public medical insurance payment fund. Operating under extremely difficult conditions, clinics with beds that provide birthing services perform risk assessments of pregnant women as well provide a 24-hour-a-day system for handling deliveries. The number of deliveries per clinic-employed physician is 216 per year, a figure that is regarded as being very close to the physical limit.

In considering the perinatal care system, it is extremely important to examine the "sustainability" of a delivery system that is dependent on clinics with beds. Can such a system realistically be maintained?

Age distribution of clinic physicians performing deliveries: According to a survey conducted by the Japan Association of Obstetricians and Gynecologists, 31% of clinic-employed physicians that provide birthing services are aged under 50 years, while 63% are aged under 60 years. Moreover, 59% of the birthing facility directors are under 60 years of age. These facts indicate that these facilities will be able to continue to provide delivery services for a considerable time into the future. In order to secure the delivery environment desired by local communities, it is necessary that clinics run by these comparatively young obstetricians/gynecologists continue to provide delivery services. Their sustainability could be enhanced through support of clinics with beds and further stabilization of their operation under the current system.

Delivery system should not be based on the public medical fee payment program: From the standpoint of supporting the operation of clinics providing delivery services, adherence to the system of medical treatment at the patient's expense for normal deliveries—the foundation of clinic operations—is imperative. Not only is the provision of delivery services is an extremely high-risk medical field but it also requires a hefty initial investment when the birthing facility is established. If the economic foundation of such birthing facilities is shaken, there will be an accelerated withdrawal of physicians from this field with absolutely no prospect of new entries. There is a basic shortage of medical resources in all fields of healthcare. Under these circumstances, it is imperative that wide-ranging incentives be provided a continuous basis to ensure the stable securement of delivery facilities.

Policy errors in the system of direct payment of the lump-sum birth allowance to medical facilities: In this sense, the system of mandatory direct payment of the lump-sum birth allowance to medical facilities (it would be more appropriate to call this the across-the-board delayed proxy payment system for medical facilities; this is completely different from the system—discontinued by force by the Ministry of Health, Labour and Welfare (MHLW)—in which individuals could request their insurer in advance to have the birth allowance paid directly to the medical facility) simply makes it more difficult to operate birthing facilities, making it a serious policy error that runs contrary to the basic national policy of securing the perinatal care system. Fortunately, mandatory implementation of this system has been delayed in the short term, but the fact that the government is considering such measures at all indicates a complete lack of understanding by the MHLW of the critical situation faced by the perinatal care provision system. (In 2011, a rescue system for small birthing clinics was developed to solve this problem.)

The Advanced Perinatal Care System

In January 2010, the Guidelines for the Estab-

lishment of Perinatal Care Systems were revised, requiring that prefectural governments devise plans for the establishment of new perinatal medical systems by FY 2010 at the latest. The 2008 MHLW report "Advisory Body on the Securement and Coordination of Perinatal Medicine and Emergency Medicine" pointed out many problems with the current perinatal care system and considered measures to address these issues. In response, the Establishment Plan of Perinatal Care Systems are now being revised in each prefecture. Prefectures need to consider the implementation of systems tailored to actual conditions on the frontlines of medical care.

Reassurance

Hospital access: In order to secure the general public's peace of mind and trust with regard to emergency care, a system must be expressly created to ensure that patients are provided with access to medical care in a rational and dependable way. Regional, prefectural, and wide-area systems for hospital admittance of patients in accordance with the severity of their condition need to be laid out quickly and clearly. Furthermore, in order to expand a region's capacity for accepting patients, it is vital that not only the number of NICU beds be increased but also that general care units (GCU) be created for children who are past the acute phase. A balanced system needs to be established through the general disclosure of actual admission conditions.

Return transportation system: Since medical resources are limited, it is difficult to create systems that enable all emergency cases to be admitted to medical facilities within the same region, and so the establishment of wide-area transport systems is imperative. In such cases, because of the insufficient functions of regional medical provision systems, patients have to be transported to medical facilities in other regions, which places a heavy burden on the patient and family, as well as the medical facility admitting the patient. In order for wide-area transportation of patients to function smoothly as a system, there is a need to guarantee "return transportation" to transport mothers and their babies back to a regional medical facility once they are past the acute phase.

Access

Improving emergency perinatal networks: To ensure patient access to advanced medical facilities, a system that smoothly and rapidly coordinates between not only perinatal care facilities within prefectures but also networks with other prefectures when necessary must be established.

Establishment of emergency perinatal care information centers and transportation coordinators: Appropriate information center functions need to be secured that can operate appropriately to actual conditions in local communities. Currently in many regions the attending physician him/herself referred patients to find appropriate medical facilities by telephone and placed the patient with a transport service. However, with medical resources so limited, this is extremely inefficient and burdensome. Already, transport coordination by midwives and office staff in several regions has been established and has achieved positive results. Establishment of systems capable of rapidly responding to emergencies, including cooperation with general emergency transport services, needs to be considered urgently.

Safety

Securing a system for providing blood for transfusion: A system ensuring sufficient blood for transfusion when necessary should be established to enable treatment of major maternal blood loss, DICs, and other perinatal emergencies. Up until now, response has been left up to individual perinatal centers, but responsibility needs to be taken by not only medical facilities but also prefectures.

Response to maternal emergencies: Cases of perinatal emergencies requiring maternal emergency response are limited. If regional perinatal centers and emergency centers coordinate appropriately in response to such cases, almost all regions are capable of providing a sufficient medical intervention. What is required is the establishment in each region of a system capable of responding quickly and appropriately to requests for transport from an ambulance team and primary delivery facilities. The concept of the Tokyo Metropolitan Government's "super comprehensive perinatal center" has become the topic of much discussion. In regions where the number of medical facilities with capacity for treating maternal emergencies is limited, such cases could be handled by providing accurate case information to these facilities for appropriate assessments.

Burden/economic perspective

Perinatal medicine and emergency medicine have essentially been regarded as unprofitable policy-based medicine, and so there are no incentives for hospitals to proactively allocate resources to these areas. Policy incentives that make hospital managers regard their facility having perinatal center functions as well as having an emergency

Table 1 Japan Society of Obstetrics and Gynecology (JSOG) Grand Design 2010 for Obstetrical and Gynecological Medical Reforms

I. Objectives
  1. Handle 900,000 deliveries in 2030
  2. Ensure that each local community possess appropriate delivery facilities
  3. Ensure that the working conditions of physicians in hospitals comply with labor-related legislations
  4. Enable female physicians to continue working in a work style tailored to their life cycle
  5. Resolve the shortfall in the number of obstetricians/gynecologists and midwives
  6. Ensure that gynecological/obstetrical care of the world top class is provided consistently and steadily

II. Outline
  1. This grand design does not simply predict the future of the obstetrical/gynecological (ob-gyn) medical system, but was also considered as a current course of action for realizing a better ob-gyn medical system.
  2. Number of ob-gyns: Secure at least 500 new obstetricians/gynecologists every year
    (1) In addition to asking for the public's understanding and cooperation, construct a collaborative system between governments (national and local levels), medical societies, medical university ob-gyn departments, and training hospitals in order to increase the number of new specialists.
    (2) Steadily promote reform of the ob-gyn training system to improve the quality of obstetricians/gynecologists.
  3. Number of midwives: Increase the number of midwives trained annually to 2,000 or more
    (1) Review midwife training system
    (2) Provide incentives for assigning midwives to clinics in particular in order to create a system which allows midwives to provide delivery care at all birthing facilities
  4. Work environment
    (1) Hospitals providing delivery services: 6–8 physicians for every 500 deliveries performed per year
      (a) Shorten physicians in-hospital time to less than 240 hours per month
      (b) Ease working conditions for physicians and promote their improvements
      (c) Increase a continuous involvement rate of clinical practice for female physicians in particular
    (2) Obstetric clinics
      (a) Ease the burden on clinic doctors as well as ensure and enhance the quality of care by employing more than two doctors and increasing employment of midwives
      (b) Expand the scale of medical services to enhance the working environment and improve the quality of medical care
  5. Regional perinatal care systems
    (1) Promote the improvement of regional perinatal care systems to ensure safety
    (2) Perform half to two-thirds* of all deliveries in ob-gyn clinics and specialized obstetric facilities** to improve the efficiency of delivery management and ensure to meet with diversified needs
      (a) Provide positive incentives encouraging the establishment of new obstetric clinics, continuation of clinics over generations, expansion of clinic operations, and continued operation of clinics in order to secure regional delivery environments.
      (b) Study the possibility to establish an "obstetric hospital" as a new type of facility to encourage the expansion of services of obstetric clinics
      * The percentage of births in clinics differs widely between prefectures, from 26% to 73% (48% overall) (2008 Population Survey)
      ** Specialist obstetric facilities: Medical facilities that mainly focus on low-risk pregnancy and delivery management that are capable of responding efficiently to the diverse needs of pregnant women, employ physicians, and preferably are able to perform emergency caesarian sections
    (3) Locate medical facilities in each region which best meets the requirements of that community, and construct a regional perinatal care system capable of handling deliveries practically and safely.
    (4) Realize safety, reassurance, and efficiency through balanced consolidation and de-concentration of resources between medical functions and pregnant women/patients to make the best use of limited medical resources.
    (5) Establish a perinatal care system in each region centered on a perinatal center with anesthesiology, neonatal care, and emergency services.
    (6) Make a closer partnership within facilities.

(Extracted and modified from the JSOG.)[2]

center as imperative are necessary.

Significant increase in perinatal care subsidies: The FY 2010 government budget dramatically increased subsidies for perinatal care-related activities. Subsidization of NICU and GCU operating costs in particular, as well as for regional perinatal maternal and child healthcare centers, can be expected to be used effectively to actively encourage the development of regional perinatal medical systems.

Medical fee revisions to improve the total areas of perinatal healthcare: During the revision process of medical fees in 2010, priority was given to the perinatal field, but the effects appear to have been limited. From the standpoint of hospital management, a scheme under which deficits are covered by subsidies is not especially appealing. Medical insurance fees in the perinatal field need to be raised and proactive investment of medical resources needs to be encouraged.

Conclusion

In this paper I have examined how to improve the (broadly defined) perinatal care system from the standpoints of the general public and patients. The Japan Society of Obstetrics and Gynecology (JSOG) Medical Reform Committee has formulated an outline for the Grand Design 2010 for Obstetrical and Gynecological Medical Reforms (**Table 1**) in order to show the current direction of reforms being undertaken in the field of obstetrics and gynecology in Japan. I hope that this table provides a useful reference on the future improvement activities for the perinatal care system in Japan.

The PowerPoint file used in the lecture presentation that forms the basis of this paper can be found at http:shusanki.org (Perinatal Medicine Forum). (In Japanese only)

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