Challenges facing workstyle reform for Japanese obstetricians and gynecologists revealed from time studies

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Abstract

\textbf{Aim:} We aimed to grasp the actual working hours of Japanese obstetricians and gynecologists (OB/GYN doctors) as accurately as possible, using the same method of the Ministry of Health, Labour, and Welfare (MHLW).

\textbf{Methods:} The time study targeted OB/GYN doctors working at 10 universities nationwide including Niigata University and 21 institutions which take a role of perinatal care in Niigata prefecture. Working hours per week were calculated based on the following categories: regular and overtime work inside the hospital, work outside the hospital, self-improvement, education, research, and others. Data on weekly working hours were converted to yearly data for analyses.

\textbf{Results:} A time study of 10 universities nationwide revealed that 30\% of doctors work overtime for more than 1860 h even if they do not include on-call shifts in their working hours. In 21 institutions in Niigata, physicians in Niigata University worked more overtime than other hospitals. It became clear that
community health care was supported by dispatching physicians working at university. Furthermore, the results of simulations predicted the pessimistic situation of perinatal medical care in Niigata.

Conclusions: Our study showed the possibility to exist much more OB/GYN doctors who work more than 1860 h of overtime work per year than the data presented by the MHLW based on nation-wide survey in 2019. The fact that the working hours at the side jobs had a great influence on the increase in overtime work of physicians in University was the same result as the report of MHLW published in 2021.

Key words: obstetricians and gynecologists, overtime work, time study, workstyle reform.

Introduction

There is no doubt that many doctors work long hours overtime. In fact, 38.3% of medical doctors in Japan work for more than 60 h per week, and the ratio is 42.1% in obstetricians and gynecologists (OB/GYN doctors).\(^1\) Japan is one of the developed countries with abundant medical resources, however, the facilities that manage pregnancy and childbirth are small in scale and dispersed in the region, and are sustained by limited OB/GYN doctors with long working hours. Medical doctors are responsible for the medical care of their patients, and their labor has a public interest aspect. For that reason, discussions on workstyle reform for doctors have been slow to progress. However, it is a general principle that the labor of doctors should be considered in the same way as ordinary workers under the Labor Standards Act. Since September 2016, discussions on workstyle reform for doctors have been underway as shown in Table 1. In principle, from April 2024 onwards, overtime work exceeding 960 h per year (Level A) will be prohibited, and overtime work over 1860 h (Level B) will be permitted only in special circumstances.

According to a survey conducted by the Japan Association of obstetricians and gynecologists (JAOG) in 2015, the average number of shifts per month for OB/GYN doctors working at the facilities that manage pregnancy and childbirth is higher than that for doctors of other disciplines, and the estimated average hospital stay per month was 296 h, which exceeded the certification standard for death from overwork.\(^2\) After that, the Japan Society of Obstetrics and Gynecology (JSOG) announced “Grand Design 2015 for Medical Reform in Obstetrics and Gynecology” with the aim of rebuilding the perinatal medical system and improving the working environment of OB/GYN doctors in hospitals. In the statement, it was reported that the number of newly registered OB/GYN doctors has not increased since its peak in 2011 and the proportion of female doctors in obstetrics and gynecology (OB/GYN) has increased. The ratio of male to female OB/GYN in their 30s is about 1:2.\(^3,4\)

In such discussions, JSOG advocated strengthening cooperation from primary to tertiary facilities for pregnancy and childbirth and prioritizing the facilities. Furthermore, JSOG set up “Sustainable Obstetrics and Gynecology” with the aim of rebuilding the perinatal medical system and improving the working environment of OB/GYN doctors in hospitals.

| TABLE 1 Progress and future plans for workstyle reforms in Japan |
|------------------------------------------|
| **Progress to the present**              |
| September 2016                           |
| o Japanese government begins discussions on workstyle reform |
| August 2017                              |
| o Ministry of Health, Labor and Welfare “Study Group on Workstyle Reform of Doctors” started |
| June 29, 2018                            |
| o Enactment of a bill on workstyle reform |
| o Correcting long working hours and realizing diverse and flexible working styles |
| o 5 years grace period for medical doctors and some other specific industries |
| March 2019                               |
| o The upper limit for overtime is set to 1860 h at the “Study Group on Workstyle Reform of Doctors” |
| July 2019                                |
| o Ministry of Health, Labor and Welfare “Study Group on Promotion of Workstyle Reform of Doctors” started |
| o More specific discussions for details and promotion of the system related to workstyle reform |
| May 21, 2021                             |
| o Bills related to workstyle reform including the amendment of the Medical Care Act were enacted through the ordinary Diet session |
| **Future plans**                         |
| April 2024-                              |
| o Start of transition period for “workstyle reform of doctors”: Upper limit of overtime work: 1860 h (special circumstances) or 960 h/year |
| April 2036-                              |
| o Practice of “workstyle reform of doctors” (upper limit of overtime work: 960 h/year) |

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and Gynecology Medical System Establishment Committee” for the implementation of the revised “Labor Standards Act concerning Workstyle Reform of Doctors” in 2019. The Committee aimed to support OB/GYN doctors in charge of local perinatal care and to propose innovation plans to the founders of medical institutions and the government to establish a sustainable OB/GYN medical care system. The Committee began discussions on how local obstetrics and gynecology medical care would be affected if OB/GYN doctors complied with the revised Labor Standards Act.

Then, in 2020, we conducted a survey on “Attitudes toward overtime work and self-training among members of the JSOG.” The survey revealed a generation gap in the views about self-training and overtime work among OB/GYN doctors in Japan.5 In July 2020, the Ministry of Health, Labor and Welfare (MHLW) published the results of the “Survey of Working Hours in 140,000 Doctors” conducted in September 2019. According to the results, 11.8% of OB/GYN doctors in university hospitals work overtime more than 1860 h per year.6 We, as members of the committee, suspected that this result did not accurately reflect the status of current work in OB/GYN doctors, thus we conducted a time study with the aim of grasping the actual working hours of OB/GYN doctors in as much detail and accuracy as possible, using the same method of the MHLW survey.7 The time study targeted OB/GYN doctors working at 10 universities nationwide including Niigata University and 21 institutions which take a role of perinatal care in Niigata prefecture.

This article shows the results of the time study and the simulations based on the obtained data. In addition, we aim to highlight the current problems in Japan and explain how to proceed with future workstyle reform for Japanese OB/GYN doctors in comparison with other countries.

**Methods**

**A time study for OB/GYN doctors in 10 universities**

The survey items were constructed according to the “Survey of the influence of workstyle reform for physicians on community health care” conducted in February 2020 under the Health and Labor Sciences Research Grant.8 Working hours per week were calculated based on the following categories: regular and overtime work inside the hospital, work outside the hospital, self-improvement, education, research, and others. Data were recorded in an Excel sheet created by the Sustainable Obstetrics and Gynecology Medical System Establishment Committee. In addition, whether the supervisors ordered the work was recorded. Data on weekly working hours were converted to yearly data for analyses.

**Participating institutes**

Hiroshima University, Hokkaido University, Mie University, Nagasaki University, Niigata University, Osaka University, Shiga University of Medical Science, Tottori University, University of Miyazaki, and Yokohama City University (10 universities in total).

**Participants**

Full-time and part-time obstetrician-gynecologist working at one of the aforementioned universities.

**A time study in Niigata University and 20 affiliated hospitals in Niigata prefecture**

Working hours were recorded and analyzed in the same way as above.

**Participating institutes**

Niigata University, Uonuma Kikan Hospital, JA Niigata Kouseiren Ojiya General Hospital, Kashiwazaki General Hospital and Medical Center, Niigata Medical-Care Cooperative Kido-Hospital, Niigata Cancer Center Hospital, Niigata Prefectural Shibata Hospital, Niigata Saiseikai Sanjo Hospital, Sado General Hospital, Sanjou General Hospital, JA Niigata Kouseiren Joetsu General Hospital, Tachikawa Medical Center, Nagaoka Red Cross Hospital, Nagaoka Chuo General Hospital, Niigata Medical Center, Niigata Prefectural Central Hospital, Saiseikai Niigata Hospital, Niigata City General Hospital, Niigata Shirone Sogo Hospital, Niigataminami Hospital, and Murakami General Hospital (21 institutions in total).

**Participants**

Full-time and part-time physicians working at one of the aforementioned institutions.

**Consolidation of facilities and estimation of required OB/GYN doctors at the facilities that manage pregnancy and childbirth**

The total number of hours in excess of 1860 h per year, which is the upper limit of Level B, was calculated based on the time in Niigata University and 20 affiliated hospitals in Niigata Prefecture.
The following assumptions were used to make the calculations.

1. For physicians working at Niigata University, up to 1860 h of overtime was calculated as work in their hospital, and more than that as support for the other hospitals.
2. For physicians working in affiliated hospitals, except for Niigata University, all overtime work was assumed to work in their own hospitals.
3. The total number of overtime hours in excess of 1860 h for each doctor at affiliated hospitals and Niigata university were added together and this was calculated as the total number of overtime hours occurring at affiliated hospitals.
4. The total number of overtime hours generated per city hospital is 6600 h, 240 days of 15 h each on weekdays and 125 days of 24 h each on weekends.

Results

A time study in 10 universities

A total of 211 responses of OB/GYN doctors were obtained, and the mean age of the respondents was 36.9 years. Table 2 shows the respondents’ working status. Approximately 67.3% of the respondents were full-time physicians, 23.2% were senior residents, and 9.5% were part-time physicians (Table 2). Regarding the overtime work in 10 universities, the maximum hours including and excluding the hours spent in “on-call/on-call outside hospital” were estimated to be 5527 and 4745 h, respectively, with a median of 1303 h (Table 3). The analysis of the working hours, including and excluding the hours spent “on-call/on-call outside a hospital,” revealed that 45% and 30% of physicians worked overtime for more than 1860 h, respectively (Table 4). The analysis based on the institution showed that the percentage of physicians working overtime for more than 1860 h ranged between 15% (University I) and 60% (University B) (Table 4), suggesting that the level of overtime work was substantially higher than the work level estimated by the government working group. Figure 1 demonstrates the differences in the details of working hours (doctor/year) of the 10 universities. Night and day duties accounted for a large proportion of the working hours in all 10 universities because of the obstetrics and gynecology specificities, although the degree and content differed among the institutions.

Table 5 shows a list of nonclinical work. The annual time of nonclinical works, including research and education, characteristics of university hospitals, and ordered by supervisors was 496 h (Table 5). In addition, the nonclinical works not ordered by the supervisors included research, education, and self-improvement were considered as voluntary behaviors, and thus, were not included in the working hours under the current definition of work hours. However, the fact that 350 h were spent annually on such activities with time constraints could not be overlooked (Table 5). Although the details are not presented in this report, the results revealed that graduate students spent significant hours doing clinical work instead of spending more time on research. It is important to establish a system that allows graduate students and young physicians to devote their time to research to strengthen Japan’s competitive power in academic research.

A time study in Niigata University and 20 affiliated hospitals in Niigata prefecture

Niigata University and its 20 affiliated hospitals have 33 and 84 OB/GYN doctors, respectively. The respondents consisted of 27 physicians working at Niigata University (response rate: 81.8%) and 55 physicians working in one of the affiliated hospitals (response rate: 76.4%). In Niigata University, the percentage of physicians corresponding to Level A (overtime work exceeding 960 h) and Level B (overtime work exceeding 1860 h) was 74% (20/27) and 48% (13/27), respectively. In 20 affiliated hospitals, the percentage of physicians corresponding to Level A and B was 49% (27/55) and 29% (16/55), respectively (Table 6). The proportion of overtime workers was higher among the physicians working in university hospital than for those working in affiliated hospitals.

Analysis of the type of overtime work in the university and the affiliated hospitals showed that the overtime period inside the university hospital was almost the same as that outside the hospital, while most overtime hours for the affiliated hospitals were those inside hospitals, indicating a significant difference based on the hospital type. The primary reasons for

| Working status          | Number of doctors |
|-------------------------|-------------------|
| Full-time physicians    | 142               |
| Senior residents        | 49                |
| Part-time physicians    | 20                |
| Total                   | 211               |

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The result are that community health care is supported by universities in terms of the provision of part-time physician services, and such part-time work is necessary for physicians working for universities to maintain a sustainable income.

Consolidation of facilities and estimation of required OB/GYN doctors at the facilities that manage pregnancy and childbirth

The number of respondents was 27 of 33 physicians in Niigata University and 55 of 84 in the affiliated hospitals. Based on the time study, the total number of hours in excess of 1860 h for doctors who are currently working above the Level B is 10,417 h for doctors working at Niigata university and 11,46 h for doctors at affiliated hospitals. Figure 2 shows a detailed number of hours of overtime work for each doctor at Niigata University and affiliated hospitals. The estimated total number of overtime hours at Niigata University is 10,417 h (33/27), 12,732 h, and the number of overtime hours at affiliated hospitals is 11,46 h (84/55), 17,023 h. For the purpose of the workstyle reform, doctors who do not currently exceed Level B will not work more than they currently do. If we were to increase the number of physicians, we would need to immediately increase 11 physicians at Level A facilities or 8 physicians at Level B facilities who can work overtime. However, in fact, overtime is not evenly distributed among the facilities, and the situation varies greatly from day to day. Therefore, it is likely that twice that number, about 20 doctors, will be needed. It is very difficult to hire 20 new OB/GYN doctors in a local city where there is a shortage of doctors and the cost of hiring 20 additional doctors would be enormous. On the other hand, if we assume that 6600 h of overtime work is generated per facility, the total 29,755 h/6600, which means that 4-5 facilities will need to be reduced, even in Niigata Prefecture, where institutions which take a role of perinatal care are being centralized. In any case, the impact on the local medical system and the lives of pregnant and nursing mothers and patients are expected to be very large.

| TABLE 3 | The overtime work in 10 universities including and excluding the hours spent in “on-call/on-call outside hospital” |
|---------|------------------------------------------------------------------------------------------------------------------|
| University | Overtime work including the hours spent in “on-call/on-call outside hospital” | Overtime work excluding the hours spent in “on-call/on-call outside hospital” |
|          | Maximum hours | Minimum hours | Median hours | Maximum hours | Minimum hours | Median hours |
|----------|---------------|---------------|--------------|---------------|---------------|--------------|
| Total    | 5527.1        | 0.0           | 1720.7       | 4745.0        | 0.0           | 1303.6       |
| A        | 3910.7        | 52.1          | 1447.0       | 3910.7        | 52.1          | 1329.6       |
| B        | 5527.1        | 0.0           | 2555.0       | 4745.0        | 0.0           | 2424.6       |
| C        | 3076.4        | 651.8         | 1746.8       | 3076.4        | 651.8         | 1694.6       |
| D        | 3597.9        | 0.0           | 990.7        | 3597.9        | 0.0           | 443.2        |
| E        | 3650.0        | 26.1          | 1486.1       | 3650.0        | 26.1          | 1355.7       |
| F        | 4458.2        | 756.1         | 1981.4       | 2424.6        | 0.0           | 1329.6       |
| G        | 3806.4        | 0.0           | 1694.6       | 3623.9        | 0.0           | 1277.5       |
| H        | 2893.9        | 391.1         | 1564.3       | 2893.9        | 391.1         | 1486.1       |
| I        | 3832.5        | 26.1          | 1720.7       | 2346.4        | 26.1          | 1238.4       |
| J        | 4327.9        | 182.5         | 2072.7       | 2685.4        | 130.4         | 925.5        |

Note: Data on weekly working hours were converted to yearly data for analyses. A to J universities and the participating institutions were arranged in no particular order. The bold values indicate the median values above the level B (working overtime for more than 1860 h per year).

| TABLE 4 | The percentage of physicians working overtime for more than 1860 h per year in 10 universities |
|---------|---------------------------------------------------------------------------------------------|
| University | Percentage of physicians who worked more than 1860 h per year (%) |
|           | Including the hours spent in “on-call/on-call outside hospital” | Including the hours spent in “on-call/on-call outside hospital” |
|----------|------------------------------------------------------------------|------------------------------------------------------------------|
| Total    | 45                                                               | 30                                                               |
| A        | 36                                                               | 30                                                               |
| B        | 75                                                               | 60                                                               |
| C        | 50                                                               | 50                                                               |
| D        | 26                                                               | 21                                                               |
| E        | 33                                                               | 22                                                               |
| F        | 64                                                               | 18                                                               |
| G        | 48                                                               | 24                                                               |
| H        | 33                                                               | 33                                                               |
| I        | 40                                                               | 15                                                               |
| J        | 36                                                               | 32                                                               |

Note: A to J universities and the participating institutions were arranged in no particular order.
Discussion

In principle, from April 2024 onwards, overtime work for more than 960 h per year and in exceptional cases, for more than 1860 h per year will be prohibited. In this time study, the current situation regarding working hours of OB/GYN doctors was clarified as follows. A time study of 10 universities nationwide revealed that 30% of doctors work overtime for more than 1860 h even if they do not include on-call shifts in their working hours. Our multicenter descriptive study showed the possibility to exist much more OB/GYN doctors who work more than 1860 h of overtime work per year than the data presented by the MHLW based on nation-wide survey in 2019. This result shows that Japanese OB/GYN doctors are working hard, comparing the results of a time study conducted by the MHLW. It was also found that the details of overtime work at each university vary greatly from region to region. In time study of

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Note: Data on weekly working hours were converted to yearly data for analyses.

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**TABLE 5** The annual time of nonclinical work as ordered/not ordered by the supervisors in 10 universities time study

|                | Annual time of nonclinical works ordered by the supervisors | Annual time of nonclinical works not ordered by the supervisors |
|----------------|------------------------------------------------------------|---------------------------------------------------------------|
| Research       | 209.6                                                      | 128.8                                                         |
| Education      | 63.6                                                       | 10.6                                                          |
| Self-improvement| 83.8                                                      | 171.3                                                         |
| Others         | 139.9                                                      | 46.2                                                          |
| Total          | 496.8                                                      | 356.8                                                         |

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**TABLE 6** The percentage of physicians who worked overtime for more than 960 or 1860 h per year in Niigata time study

| Institution     | Physicians who worked more than 960 h per year (%) | Physicians who worked more than 1860 h per year (%) |
|-----------------|----------------------------------------------------|-----------------------------------------------------|
| Niigata University | 20 (74.0%)                                       | 13 (48.1%)                                         |
| Affiliated Hospitals | 27 (49.0%)                                    | 16 (29.1%)                                         |
| Total            | 47 (57.3%)                                       | 29 (35.4%)                                         |

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FIGURE 1 Differences in the details of working hours (doctor/year) of the 10 universities. Working hours per year were calculated based on the following categories: “clinical regular,” “nonclinical,” “night duty,” and “on call” work.
FIGURE 2 Detailed number of hours of overtime work for each doctor at Niigata University (a) and affiliated hospitals in Niigata (b). The detailed number of overtime hours per year was shown by each OB/GYN doctor in Niigata.
facilities in Niigata, physicians in Niigata University worked more overtime than other hospitals. It became clear that community health care was supported by dispatching physicians working at university. The fact that the working hours at the side jobs had a great influence on the increase in overtime work of physicians in university was the same result as the report of the Health and Labor Sciences Research Group published in 2021. Furthermore, the results of simulations based on the obtained data predicted the pessimistic situation of perinatal medical care in Niigata.

The surveys we implemented accomplished considerably higher response rate than that in nationwide survey, whose effective response was only 6.3% of all distributed number. Therefore, it could be said literally real-world data demonstrating the working pattern of OB/GYN doctors in Japan. Another research the MHLW implemented clarified the actual working hours of doctors who were belonged to university hospitals where most physicians engage in multiple external appointments. Different from those prior studies, our studies were focusing on the cases of OB/GYN doctors, therefore, our data is worth planning strategy for reforming work style in OB/GYN looking ahead to post 2024, when the statutes related to the revolution of work style for medical doctors start.

Given that the nature of the care which OB/GYN served, in case that emergent situation occurred 24/7 in all medical institutions which take a role of maternal-fetal medicine (MFM), we need to allocate the same number or more doctors as the number of facilities even in the night or weekend shift. Our model to estimate how extent we should increase the number of required doctors and how extent we should mitigate the number of facilities with a role of MFM could be a basis when we proceed with the initiative of reforming current medical care provision system more sustainable.

The introduction of the guideline for reducing working hours has already started in other countries and regions mainly for residents and young doctors who engage in a training program. It has been more than 10 years since the regulation for medical doctors from the European Working Time Directive (EWTD) implemented in most European countries including United Kingdom. The EWTD regulation has key components as follows: “the average working time for each seven-day period including overtime does not exceed 48 hours,” “11 hours rest a day,” “a day off each week,” etc. Accreditation Council for Graduate Medical Education (ACGME), who sets and monitors the professional educational standards essential in preparing physicians to deliver safe and high-quality medical care to all Americans, also has implemented the regulation of working hours to residents and fellows, who are post graduate year less than around 10. According to the education program, working hours are restricted within the 80-h maximum weekly limit. It corresponds to the upper limit of the new Japanese legislation on working hours for medical doctors. Besides, The American College of obstetricians and gynecologists (ACOG) published the committee opinion regarding fatigue and patient safety, which recommends that all stage physicians need to avoid excessive fatigue or over-commitment and should commit to evaluating the effects that fatigue has on their professional and personal lives. Those regulation and guideline could be effective to control the doctors’ working hours by means of external leverage. Additionally, the existence of the guideline for all stage physicians would have worked the change of mindset in OB/GYN doctors regarding work hours management.

There is no doubt that well-being of physicians directly affects the well-being of patients, which is the basic model launched in 2017 by the Institute of medicine. To accomplish this, it is inevitable to regulate and manage working hours of physicians. The overload of working in MFM doctors could increase the rate of burnout more than the doctors in other subspecialty areas, also more than those in Gynecologic Oncology in terms of the subspeciality in OB/GYN. Therefore, working long hours cannot be sustainable for not only the MFM provision system but also individuals of OB/GYN doctors.

On the contrary, we need to consider limiting working hours may negatively affect the opportunity of surgical procedure and obstetrics procedures such as spontaneous vaginal, operative vaginal, and cesarean delivery. In the United States, it was a big concern if the introduction of the regulation of working hours could impact on the loss of training cases the residents had. A report in 2004, which contained only 10 residents, showed there was a significant decrease in the experience of gynecologic and obstetric procedures. On the other hand, the other most literatures demonstrated that duty-hour restriction did not adversely impact on trainee’s experiences. It also needs to be assessed the negative educational effect by the new legislation in Japan. Furthermore, we need to know the safety of surgical procedure after long-time working shift or night shift in gynecologists, however, little is found in literature. As a matter of
fact, the evidence of the effect of restricting working hours and working after night shift is conflicting and controversial.\textsuperscript{23–26}

The workstyle reform for doctors will be implemented nationwide from 2024. The JSOG is continuing activities to practice sustainable medical care of obstetrics and gynecology with a sense of crisis. At the 73rd annual congress of JSOG, the “Niigata Declaration” was issued to the JSOG members (Table 7).

The declaration contains the content that the committee has been discussing for 2 years on how to ensure the work-life balance of OB/GYN doctors and establish a sustainable perinatal medical system.

While doctors have a responsibility to protect the lives of the people, it is also important to reform work styles to ensure the human life of doctors. If workstyle reform reduces the working hours of doctors, the reform will have a negative impact on medical activities in areas where there is a shortage of doctors. In particular, the impact is considered large in obstetrics and gynecology, where the uneven distribution of doctors by region is large. The reform is also closely related to the administrative work that supports the health and life of the people. On the other hand, an excessive increase in overtime work by doctors is greatly related to a decrease in medical safety. Therefore, workstyle reform for doctors is necessary to provide safe medical care to patients.

In order to improve working styles, it is necessary for individual doctors and clinics to review the division of duties to improve work efficiency, abolish the attending physician system, and create a system that enables smooth shift work. It is necessary for doctors in hospital to create a system of working environment that makes it easy to work and rest by introducing task shifts, medical office staff, and flextime. From an administrative standpoint, it is important not only to consolidate hospitals, but also to gain public understanding of the workstyle reform of doctors. It is also necessary to listen to the opinions of the people while conducting the discussion. There are many problems that must be resolved in the workstyle reform of OB/GYN doctors, such as whether to consider the working hours of night shifts and day shifts as overtime work. Simply reducing the apparent working hours will worsen the QOL of OB/GYN doctors, such as a decrease in income, leading to a decrease in the number of trainees who wish to pursue obstetrics and gynecology. Eventually, a vicious cycle will occur in which the working environment of obstetricians and OB/GYN doctors deteriorates. It is a very complicated issue, however, it is important to continue discussions among individual doctors, clinics, hospitals, local governments, and the national government.

As OB/GYN doctors, we need to think of it as an urgent and familiar issue of workstyle reform toward the coming 2024. It is important for the relevant departments to discuss together in each region and continue to come up with solutions that suit the circumstances of each region. It should be remembered that workstyle reform is not just for doctors, but for improving patient safety. We must enter April 2024 while solving various problems. The activities of the “Sustainable Obstetrics and Gynecology Medical System Establishment Committee” will continue, and we hope that the committee will continue to have more lively discussions.

Acknowledgments

The authors would like to express our gratitude for the cooperation of the study participants, OB/GYN doctors working at 10 universities and 21 institutions in Niigata Prefecture.

Conflict of interest

The authors declared no potential conflicts of interest.

Author Contributions

Masayuki Sekine, Koji Nishijima, Satoshi Nakagawa, and Yukio Suzuki contributed equally to this study.
They made substantial contributions to conception and design, analysis and interpretation of data, and drafting of the manuscript. Takayuki Enomoto, Takashi Murakami, and Yasuhiro Kato made substantial contributions to conception and design, critical revision of the manuscript for important intellectual content, and supervision. Takeshi Umazume, Hiroaki Tanaka, Hiroaki Komatsu, and Koutaro Doi made substantial contributions to acquisition of data and analysis and interpretation of data. Kiyonori Miura and Yoshiki Kudo made substantial contributions to critical revision of the manuscript for important intellectual content. Nobuya Unno and Tadashi Kimura made substantial contributions to conception and design, critical revision of the manuscript for important intellectual content, and supervision. All listed authors meet criteria for authorship and finally decided on the content of the manuscript.

References

1. Ministry of Health, Labor and Welfare. Actual working condition of medical doctors. 2020. Available from: https://www.mhlw.go.jp/content/10800000/000677264.pdf.
2. Japan Association of Obstetricians and Gynecologists. Questionnaire survey report on improving the treatment of obstetricians and gynecologists and the working environment of female doctors. 2015. Available from: http://www.jsog.or.jp/all/document/94_160113_2.pdf.
3. Japan Society of Obstetrics and Gynecology, Medical Reform Committee. Grand design 2015 for medical reform in obstetrics and gynecology. 2015. Available from: http://www.jsog.or.jp/news/pdf/12015_010520.pdf.
4. Japan Society of Obstetrics and Gynecology, Medical Reform Committee. Changes in the age and gender distribution of obstetricians and gynecologists in Japan over the past 10 years. 2015. Available from: https://www.jsog.or.jp/theme_page.html?id=284.
5. Mayama M, Sekine M, Onodera Y, Suemitsu T, Maeda Y, Nakano K, et al. Attitudes toward overtime work and self-training: a survey on obstetricians and gynecologists in Japan. J Obstet Gynecol Res. 2021;47(5):1666–74.
6. Ministry of Health, Labor and Welfare. Survey on the working conditions of doctors. 2020. Available from: https://www.mhlw.go.jp/content/10800000/000652880.pdf.
7. Working Style Reform in Obstetrics and Gynecology. Japan Society of Obstetrics and Gynecology. 2021. Available from: https://www.jsog.or.jp/news/pdf/73_sustainable_kikaku.pdf.
8. Survey of the influence of workstyle reform for physicians on community healthcare (Summary). Available from: https://www.mhlw.go.jp/content/10800000/000655274.pdf.
9. Survey of physicians’ work conditions in 2019 (Summary). Available from: https://www.mhlw.go.jp/content/10800000/000653217.pdf.
10. Ministry of Health, Labor and Welfare. Survey on the impact of work-style reforms for doctors on community medicine. 2020. Available from: https://www.mhlw.go.jp/content/10800000/000652882.pdf.
11. Ministry of Health, Labor and Welfare. “Shingata coronavi-rus kansensho en taiou wo fumaeta ishino hatarakikata ga daigaku byouin kimnui no hatarakikata ga taiou eikyo no kensho to sono taisaku ni shirusu kenyuku” [Investigation on the influence and strategy of the policy of workstyle reforming for medical doctors who work at university hospital in the context of COVID-19 pandemic]. Available from: https://www.mhlw.go.jp/stf/newpage_17636.html.
12. Ministry of Health, Labor and Welfare. “Dai 12kai ishino hatarakikatai kaku no suishin ni kansuru kentoukai shiryo 1” [The enactment of the bill of labor reform law for medical doctors]. Available from: https://www.mhlw.go.jp/content/10800000/000794594.pdf.
13. The British Medical Association (BMA). Doctors and the European working time directive. Available from: https://www.bma.org.uk/pay-and-contracts/working-hours/european-working-time-directive-ewtd/doctors-and-the-european-working-time-directive.
14. Pärgmäe P, Martins N, Rodriguez D, Christopoulos P, Werner HM. European working time directive: implementation across -Europe and consequences upon training in obstetrics and -gynaecology. Facts Views Vision ObGyn. 2011; 3(1):46–50.
15. Accreditation Council for Graduate Medical Education: Obstetrics and gynecology, Program Requirements and FAQs 2020. Available from: https://www.acgme.org/.
16. ACOG Committee Opinion No. 730: Fatigue and patient safety. Obstet Gynecol. 2018;131(2):e78–81.
17. Brigham T, Barden C, Doppe AL, Hengerer A, Kaplan J, Malone B, et al. A journey to construct an all-encompassing conceptual model of factors affecting clinician well-being and resilience. NAM perspectives. Discussion Paper. Volume 8. Washington, DC: National Academy of Medicine; 2018.
18. Hughes F, Francis AP, Sciscione AC. Physician burnout among members of the Society for Maternal-Fetal Medicine. Am J Perinatol. 2020;37(11):1115–22.
19. Rath KS, Huffman LB, Phillips GS, Carpenter KM, Fowler JM. Burnout and associated factors among members of the Society of Gynecologic Oncology. Am J Obstet Gynecol. 2015;213(6):824.e1–9.
20. Blanchard MH, Amini SB, Frank TM. Impact of work hour restrictions on resident case experience in obstetrics and gynecology residency program. Am J Obstet Gynecol. 2004;191(5):1746–51.
21. Occhino JA, Hannigan TL, Baggish MS, Gebhart JB. Resident duty-hour restrictions and their effect on operative experience in obstetrics and gynecology. Gynecol Obstet Investig. 2011;72(2):73–8.
22. Kane SM, Siddiqui NY, Bailit J, Blanchard MH. Duty hour restrictions, ambulatory experience, and surgical procedural volume in obstetrics and gynecology. J Grad Med Educ. 2010; 2(4):530–5.
23. Veddeng A, Husbj T, Engelsen IB, Kent A, Flaatten H. Impact of night shifts on laparoscopic skills and cognitive function among gynecologists. Acta Obstet Gynecol Scand. 2014;93(12):1255–61.
24. Balch CM, Shanafelt TD, Dyrbey L, Sloan JA, Russell TR, Bechamps GJ, et al. Surgeon distress as calibrated by hours worked and nights on call. *J Am Coll Surg*. 2010;211(5):609–19.

25. Bilimoria KY, Chung JW, Hedges LV, Dahlke AR, Love R, Cohen ME, et al. National cluster-randomized trial of duty-hour flexibility in surgical training. *N Engl J Med*. 2016;374(8):713–27.

26. Desai SV, Asch DA, Bellini LM, Chaiyachati KH, Liu M, Sternberg AL, et al. Education outcomes in a duty-hour flexibility trial in internal medicine. *N Engl J Med*. 2018;378(16):1494–508.