

## Disease burden of MSD for the Japanese society Fit for work scheme as a solution for this problem

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### Abstract

Work can cause and cure ill-health of workers. The appropriate health support system will make it possible for the workers to act proactive for prevention and to return to work as early as possible. Work is not merely a tool for live but also something for purpose and meaning of life.

Although the previous literatures have clarified the importance of MSDs on nation's health and economy, these disorders have not been received enough attention as an important problem. In fact MSDs are common health disorders and one can continue to work with symptoms related MSDs. However, the European Trade Union Institute estimated that the cost of work related MSDs would be between 0.5 and 2.0% of gross domestic product (GDP). In Japan, ACCJ has estimated that the pain associated cost at the occupational setting is JPY88 million by absenteeism and JPY52.6 million by presenteeism.

Regarding the above-mentioned situation, it is necessary to implement to appropriately support the workers with MSDs and other ill-health problem for return to work as early as possible. Fit for work (FFW) service is one of such solutions. For this purpose, our university is now organizing a FFW program targeting to RA and other MSDs.

**Key words:** FFW, Fit note, MSDs, Rheumatoid arthritis

### ❖ Introduction —burden of MSDs in Japan—

Because of its characteristic as common diseases or symptoms, Musculoskeletal disorders (MSDs) have not been paid enough attention as serious health problems in Japan. The previous literatures have clarified that MSD has a largely negative impact on productivity of workers and then social security system<sup>1)-5)</sup>. In the European Union (EU), MSDs affect more than 40 million workers and account for about half of all work related disorders. According to the official statistics of Ministry of Health, Labour and Welfare (MHLW), Japan, MSDs occupy a considerable part of work related ill-health, i.e., accident related back pain counts for 60% of total compensation cases of Worker's accident compensation law in 2011 as shown in Figure 1<sup>6)</sup>. Another

annual survey, the Comprehensive Survey of Living Conditions also clarifies the importance of MSDs for the Japanese workers (Table 1)<sup>7)</sup>. Using the National Livelihood Survey, Nakamura et al have reported that the 15.4% of the Japanese population experience some kinds of chronic pain<sup>8)</sup>. The majority of chronic pains are related with MSDs and last for rather long time (more than several years). The previous literatures have indicated that the MSDs would have important negative effects on general health condition, workability, productivity, general economy and social security finance.

The European Trade Union Institute estimated that the cost of work related MSDs would be between 0.5 and 2.0% of gross domestic product (GDP)<sup>1)</sup>. The European Commission estimates that MSDs account for 49.9% of all absences from work lasting three days or longer and for 60% of permanent work incapacity<sup>5)</sup>. In Japan, ACCJ has estimated that the pain associated cost at the occupational setting is JPY88 million by absenteeism and JPY52.6 million by presenteeism<sup>9)</sup>.

Figure 2 shows the causes of absence from work (Kanagawa Prefecture Association of Labor, Safety and

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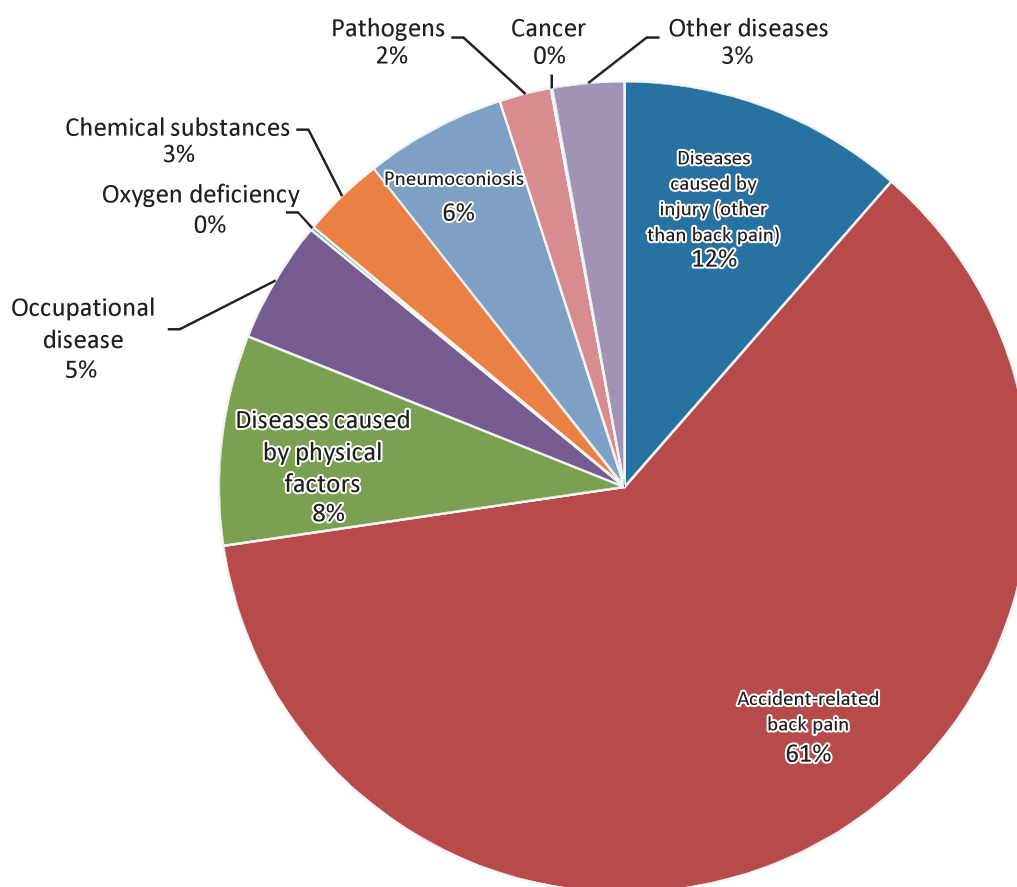
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Table 1 Subjective symptoms of workers in Japan as indicated by the Comprehensive Survey of Living Conditions

(N=17,857, multiple answers)

	Subjective symptoms	Total	Percentage
1	Stiff shoulders	6,605	37.0%
2	Back pain	6,275	35.1%
3	Lethargy	3,191	17.9%
4	Stuffy/runny nose	2,814	15.8%
5	Cough, phlegm	2,741	15.3%
6	Hand/foot joint pain	2,688	15.1%
7	Headache	2,672	15.0%
8	Red eyes	2,028	11.4%
9	Itch (heat rash, athletes foot, etc.)	2,018	11.3%
10	Numbness in hands or feet	1,761	9.9%

Source: Ministry of Health, Labour and Welfare “2012 Comprehensive Survey of Living Conditions”



Source: Ministry of Health, Labour and Welfare “2011 Work related Illness Incidence Survey”  
 Figure 1 The importance of MSDs as a cause of work related disorders MSDs: Musculo-skeletal disorders

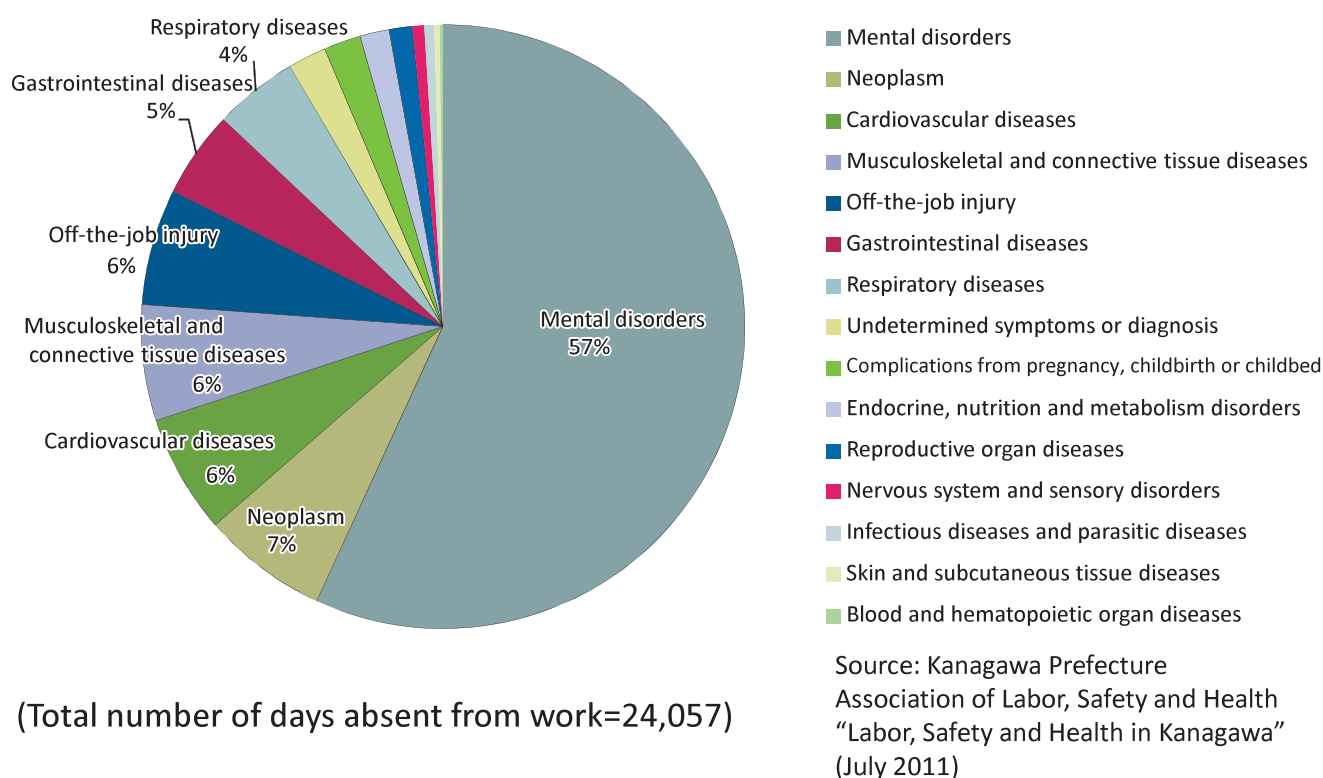


Figure 2 Causes of absence from work by type of disorders

Health)<sup>10</sup>). Fifty seven per cent was due to mental disorders, and MSDs accounted for only 6%. Considering the situation indicated in Figure 1 and Table 1, it is easily estimated that MSDs related presenteeism should be rather important in the Japanese society.

Suka and Yoshinda have reported that the loss of QALYs due to low back, hip and knee pain among the Japanese adult population is 17.2, 3.8 and 8.9 per 100,000 population in 2005 respectively<sup>11</sup>). According to the WHO estimation in 2009, the DALYs loss due to MSDs was 10,170 per 100,000 population<sup>12</sup>).

As we have reported in the previous literature, MSDs are one of the most important causes of dependency among the slightly frail aged who used the long term care insurance (LTCI) scheme<sup>13</sup>). Considering this situation, MHLW has started the physical fitness program in aiming the prevention of MSDs related dependency from 2008. Photo 1 is an example of the community based physical fitness class.

Above findings have clearly indicated that MSDs have considerable life-long negative effects on QOL of individual and national economy. This is one of the reasons why United Nations (UN) and World Health Organization (WHO) have endorsed the Bone and Joint Decade<sup>14</sup>). This global initiative is intended to improve the lives of people with musculoskeletal disorders, such as

arthritis, and to advance understanding and treatment of musculoskeletal disorders through prevention, education and research. In Japan, the Bone and Joint Decade Japan has started their activity in 2000<sup>15</sup>). Their main activities are as followings;

- pilot project on screening of MSDs
- education of physical fitness educators for MSDs' prevention
- publication

The Bone and Joint Decade Japan has formulated a notion of "locomotive syndrome" and is making effort to advance the physical fitness program for prevention of MDSs. However, their activities mainly focus to the aged people not to workers. It is an important issue how to implement this program in the occupational settings. MHLW knows well about the MSDs related problems in the occupational settings. Thus they have published a series of guidelines for the prevention of MDSs at the worksite. The guideline for prevention of low back pain in the occupational settings is such an example<sup>16</sup>). There is a concern of MHLW that the current situation of MSDs prevention activities is not sufficient.

In order to facilitate the MSDs prevention activities it is required to ameliorate the consciousness of related persons (employers, employees, occupational health professionals, clinicians, payers and government), to



Once a week, the slightly frail aged attend the physical fitness class organized by the city. The class is held at the community center.

Photo 1 An example of the community based physical fitness class (Yukuhashi city, Fukuoka, Japan)

facilitate the communication between occupational health professionals and clinicians, to introduce an appropriate tool for communication (i.e., fit note, see below), and to formalize the system for fit for work activities into the Japanese social security system as explained later.

### ❖ Actual system of fit for work in Japan

Fit for work (FFW) is a movement of the ill-health prevention and ill-health management in the occupational setting<sup>17)</sup>. FFW is a network of clinical services, occupational health and safety specialists who commit to providing quality medical care and treatment that minimizes disability and restores functioning for the ill-health person, so they can continue to work. FFW has started in UK and has spread to other European countries. FFW is a newly formulated concept but most of the developed countries such as Japan, have a similar

program in the occupational health activities.

Figure 3 explains the actual FFW equivalent scheme for return to work in Japan. There are two courses. In the Japanese Occupational Safety and Health Law, the employers must organize the annual health check-up program. The Japanese annual health check-up program covers a wider range of ill-health compared with similar programs of other countries. If a person is screened out for ill-health (i.e., liver dysfunction, mental problems, hypertension, diabetes, etc) and the situation requires a consultation by clinician, the occupational physician in charge must refer the worker to the appropriate clinician. The clinician issues the clinical opinion about the workability to the company. Usually this opinion sheet is transferred to the occupational physician who then evaluates the workability and asks for the employer the modification of working condition, if necessary. The second course is a voluntary one. If a worker has a health problem that influences

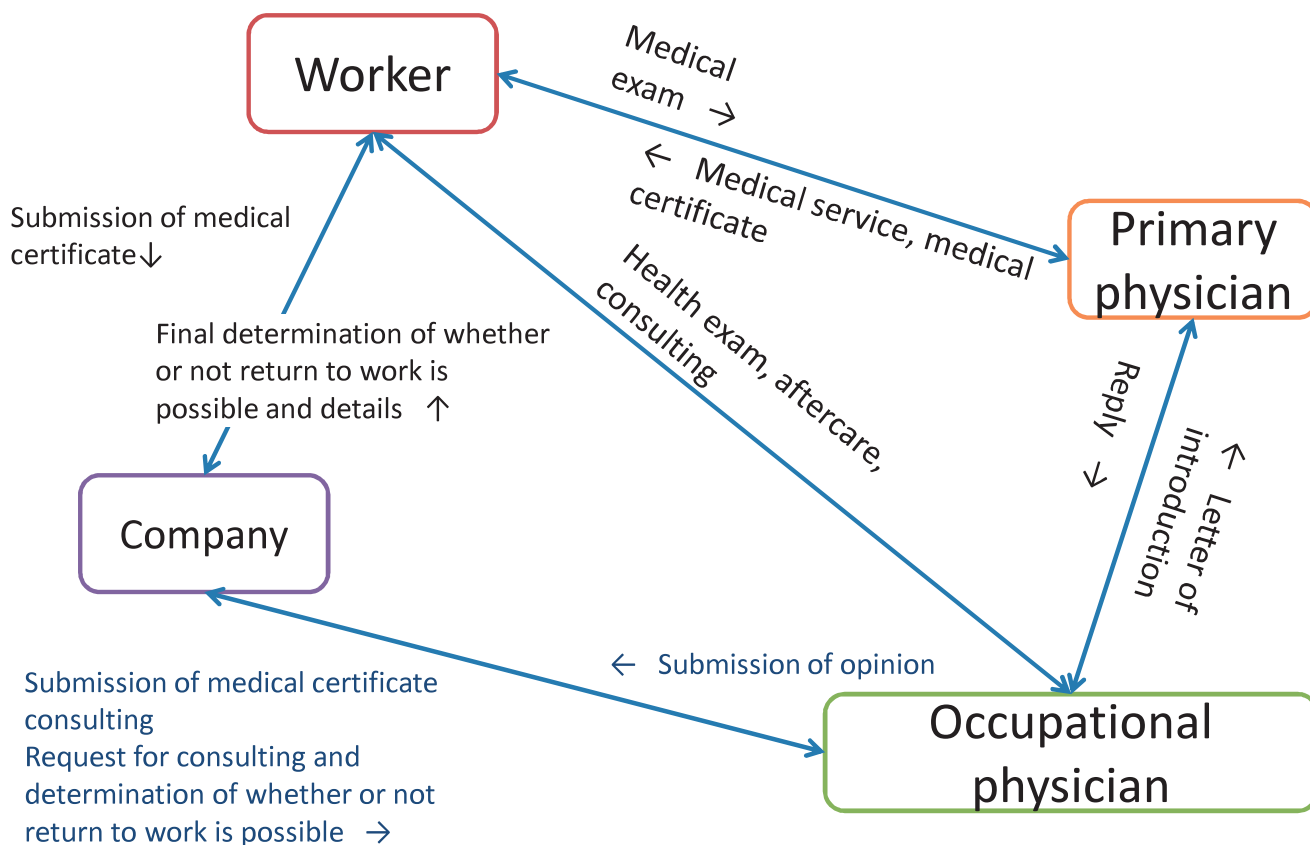


Figure 3 Current relationship between FFW stakeholders in Japan

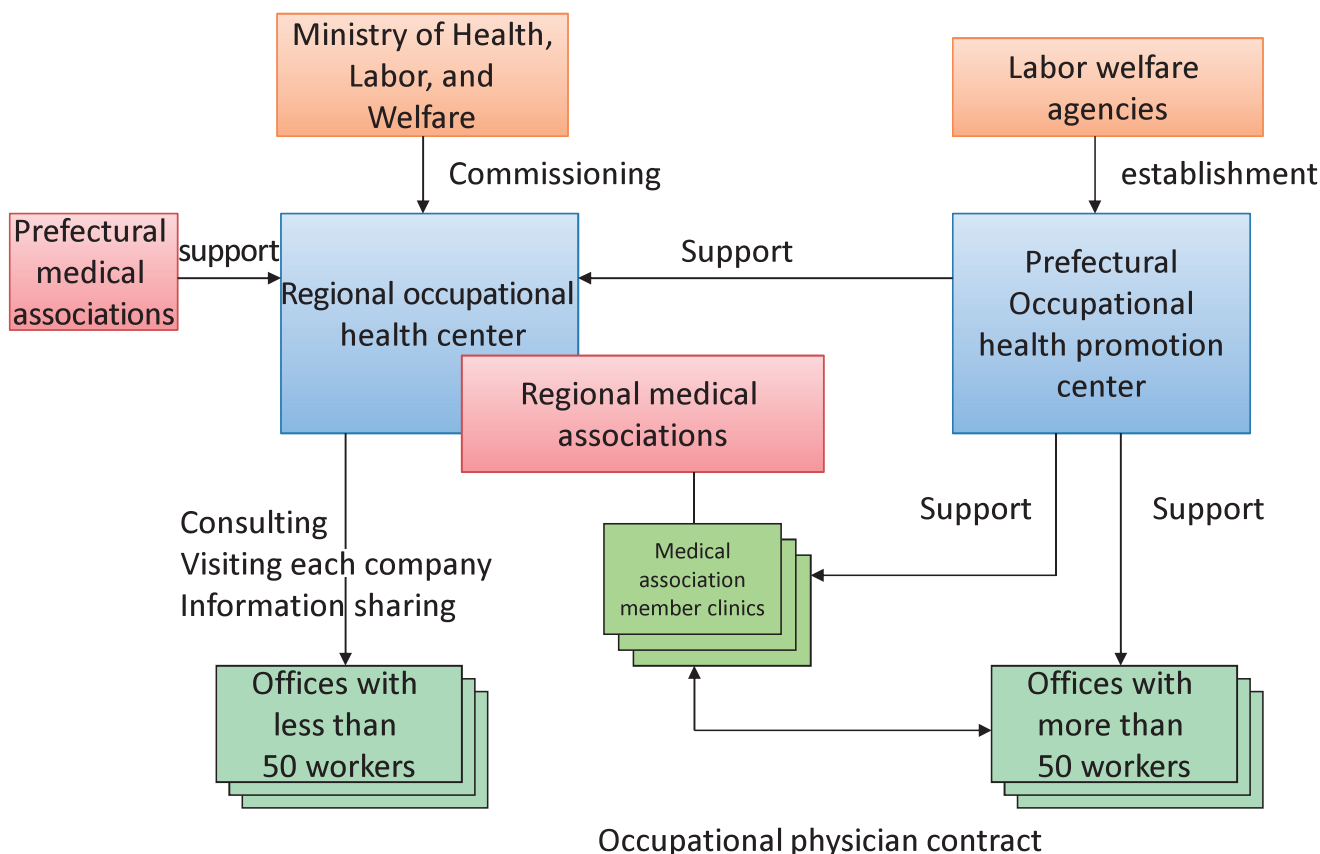


Figure 4 Japan's system of regional occupational health

株式会社  事業所  
 雇用形態スタッフ 雇

伊 月 日  
 医療機関の所在地  
 医療機関名  
 診療科  
 担当医

**職場支援センターに関する情報提供書**

患者氏名 \_\_\_\_\_ 生年月日 年 月 日 (男・女)

(※性別記入欄)

診断書病名または症状: \_\_\_\_\_

罹年月: \_\_\_\_\_ 年 \_\_\_\_\_ 月 \_\_\_\_\_ 日より診断可 (診断可能が可成)

既往病歴又は既往病治療の経緯 (病名、薬) \_\_\_\_\_

治療経過: 手術、薬物など \_\_\_\_\_

検査経過:

入院治療 (病名、年、月、日、月、日)

手術 (病名、年、月、日)

検査経過 (検査名、年、月、日) (検査) \_\_\_\_\_

リハビリ等その他経過: \_\_\_\_\_

コメント: \_\_\_\_\_

職業病診断: \_\_\_\_\_ (病名、年、月、日) (東、西) \_\_\_\_\_

職業病診断、今後の経過:

- 今後経過観察が必要 (病名、年、月、日) \_\_\_\_\_

(内務省) \_\_\_\_\_ (リハビリ等その他経過) \_\_\_\_\_

- 業務に影響を及ぼすと思われる症状、その程度など (病名、年、月、日) \_\_\_\_\_

- 本業務のサポートに必要 (病名、年、月、日) \_\_\_\_\_

- 今後の対応について見直し等

業務  業務 (見直し)  部分

再発リスク (病名、年、月、日) \_\_\_\_\_

コメント: \_\_\_\_\_

就業上の配慮、回復のための必要な注意事項等

労働時間 (可・制限・禁止)  労働時間 (可・制限・禁止)

夜勤 (可・制限・禁止)  出勤 (可・制限・禁止)

休日労働 (可・制限・禁止)

通勤手段 (可・制限・禁止)  一人作業 (可・制限・禁止)

重機等を使用 (可・制限・禁止)  業務内容 (可・制限・禁止)

暑熱環境 (可・制限・禁止)  業務内容のある業務 (可・制限・禁止)

寒冷環境 (可・制限・禁止)  有害物、影響を及ぼす業務 (可・制限・禁止)

就業上の配慮、その他コメント \_\_\_\_\_

Part of general clinical information

- name, sex, age
- Diagnosis and treatment
- Past history
- Clinical risk to be paid attention

Part of FFW information

- Check lists for conditions to be paid attention for return to work/adaptation to work
- Comments of clinician for FFW

Figure 5 The UOEH Hospital Version of form for sharing information related to supporting return to the workplace

one's workability and/or productivity, he/she has a consultation of clinician. Then the clinician sends his opinion sheet to the company. This system is working well to some extent. However, there are some problems as followings;

- Primary care physicians do not always have sufficient knowledge in regard to the impact of the ailment on the patient's job.
- Occupational physicians sometimes do not have sufficient knowledge in regard to the clinical aspects of a worker's affliction.
- No standard format of opinion sheet from clinician to occupational physician
  - The quality of information varies a lot.
- Not all workers are subject to health management by an occupational physician.
  - The deployment of occupational physician is dependent upon the number of workers as follows:
    - ◇ more than 1,000: Full time occupational physicians
    - ◇ 50~999: Part time occupational physicians in most cases

◇ Less than 50: no requirement of hiring occupational physicians, thus occupational physicians are not present in most cases

Especially it is very important to implement the FFW services that cover the workers of small and medium size enterprises (SMEs). The number of SME workers is very large (more than 80%) and they have higher possibility to belong to the vulnerable groups (i.e., weaker job protection, higher health risk). In the case of Japan, it is unrealistic that all SMEs' owners contract with occupational physicians as in France<sup>17)</sup>. It is more plausible that primary care physicians cover some part of occupational health activities as in UK<sup>18)</sup>. In fact, there are about 200,000 of clinicians who are qualified as occupational physicians in Japan. MHLW has implemented the Regional Occupational Health Center in collaboration with the Local Medical Association as shown in Figure 4. They have a function to support the SMEs' employers and workers for occupational health issues. The problem is that this system is not working well. There is a critic that this system has

no incentive for local clinicians to be actively involved. The causes are financial and philosophical. Most of clinicians do not imagine that their final goal of treatment is to make it possible for their clients return to work or adaptation of work. They think that their task is to lessen the pain/symptoms and to completely cure the patient.

Work can be both cause and cure. Whilst the physical and social condition of work may cause or aggravate health situation, the previous evidences suggest that work can help ameliorate the deterioration of many health conditions<sup>18)</sup>. Work can be a part of clinical treatment. The clinician needs to understand the importance of vocational rehabilitation. Work can give a person purpose and meaning of one's life. This requires the FFW concept to be formalized into the current health system.

### ❖ Future direction —a creation of the Japanese version of Fit note—

In order to materialize the FFW concept in the current Japanese health system, it is necessary to implement a communication tool between occupational and clinical settings. For this purpose, our university (University of Occupational and Environmental Health; UOEH) have developed the standardized form of sharing information related to supporting return to the workplace, that is, the Japanese version of fit note (Figure 5). Now a clinical team of our university hospital is testing the validity and usability of this “fit note” in Kitakyushu area using the network between clinical and occupational settings. At the first stage, we focus to rheumatoid arthritis (RA) and other MSDs as target diseases, because our university has already set up the good collaboration system between our university hospital and other medical institutions for RA treatment in Kitakyushu area. If this attempt will go well, we have an intention to propose the generalization of this fit note for other health problems such as cancer, mental health problem and COPD.

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