Good Practice

Effective use of an occupational health physician's formal recommendation to improve the environment for contractors at a small-scale workplace

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Abstract

This report is a case study of the effectiveness of an occupational health physician's formal recommendation for improving the working environment at a workplace where the employees work on a contract basis. At the business premises, Office B of Company A, where one of the present authors has been appointed as an occupational health physician, some employees have been performing contract work at a Factory Q run by a Company P. Despite dust, organic solvents, and specified chemical substances having been handled in Factory Q for many years, the Company P had not performed any measurements of the working environment, had not installed all the ventilation devices needed for organic solvents and other regulated chemical substances, and had not posted wall-notice with information about the substances handled. Company P had not made use of any occupational health services at Factory Q. Based on a workplace inspection visit report by the former occupational health physician, the site director of Office B requested Company P to make certain improvements, but no measures had been taken. The site director and the occupational health physician then discussed the situation, and notified the top management of Company A about the potential for making a formal recommendation of an occupational health physician. Subsequently, the chief executive officer of Company A sent Company P a document requesting improvement of the working environment based on the report of the occupational health physician. Company P then improved the working environment on that basis.

Keywords: occupational health physicians, recommendation, small-scale enterprise

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Background

An amendment to the Japanese Industrial Safety and Health Act (ISH Act) in 1996 stipulated that to protect employees' life and health, occupational health physicians (OHPs) have the authority to present companies with formal recommendations (termed "kankoku" in Japanese)^{1,2}. This means that OHPs are empowered to

present formal recommendations to avoid major risks to employees' lives or health. During July 2018, the Act on the Arrangement of Related Acts to Promote Work Style Reform was passed, amending the ISH Act to reinforce the independence and neutrality of OHPs. It makes clear that companies should respect OHPs' formal recommendations and record and archive the details of the formal recommendation and any measures taken in response. These changes have increased the effectiveness of formal recommendations.

The ISH Act stipulates that business premises with 50 or more regular employees must appoint an OHP. However, those with fewer than 50 employees make up 96%

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of the total in Japan, and OHPs have a duty of diligence even at such premises³⁾. Small business premises can have occupational health services provided by General Occupational Health Promotion Centers and Regional Occupational Health Centers, run by the Japan Organization of Occupational Health and Safety, but there are concerns about this resulting in less continuity than when OHPs are appointed internally⁴⁾.

Japanese small- and medium-sized businesses sometimes undertake contract work for other businesses (referred to as “principal businesses”). This involves the contracting of tasks alone, and the workplace and facilities where the tasks are performed are often run by the principal business. In this case, it is essential for occupational health management to be consistent and unified between the principal business and contractor. However, in practice, the rate of occupational accidents among contractors is higher than among the principal business’s employees⁵⁾. More dangerous and/or harmful tasks are often allocated to contractors, and contractors usually work on the principal business’s premises, so it is impossible for them to take sufficient independent action to prevent all workplace harm and injuries⁵⁾.

One important issue in occupational health in recent years is chemical substance control in the workplace. There have been occurrences of bile duct cancer because of 1,2-dichloropropane at printing companies⁶⁾ and bladder cancer because of ortho-toluidine and other aromatic amines at chemical plants⁷⁾. The Ministerial Ordinance covering individual chemical substances has, therefore, been strengthened. However, only approximately 20% of work-related diseases resulting in workday loss of 4 days or more are caused by individually regulated chemical substances, including carcinogens, mutagens, heavy metals, organic solvents, and allergens. The rest are related to substances that are not covered by official regulations⁸⁾. Risk assessment of chemical substances is mandated by the ISH Act; however, it was only carried out in 52.8% of workplaces using regulated chemicals in 2017⁸⁾, which was primarily because of the lack of occupational health professionals.

Viewpoint on improvement

This report is a case study demonstrating the effectiveness of an OHP’s ability to make formal recommendations to improve the working environment for contract work with the risk of exposure to chemicals and other workplace safety issues in a small factory.

The corporate organization in this case study is shown in Figure 1A. Company A’s Office B carries out the maintenance and repair of railroad rolling stock. In the April of Year X, one of the authors took over the responsibility as OHP at Office B. At the time, it had 52 employees, but the following year, this had fallen to 48 employees, so

it was classified as a small business. All the employees were male, and the mean age was 39.1 years. Although this location was no longer obliged to appoint an OHP, it did so anyway, as part of managing health and safety. The OHP continued to visit Office B once a month, participated in health and safety committee meetings, performed workplace inspections, and managed the health of the employees.

Since Year X–26, around 10 employees of Office B, Company A had been servicing rolling stock in Factory Q, Company P. This case study relates to the improvement of the working environment at Factory Q under semi-formal recommendations prepared by the OHP of Office B.

Figure 1B is an outline plan of Factory Q, where the following operations are performed: (i) operations generating dust and fumes by grinding, polishing, and welding; (ii) operations using organic solvents (isobutyl alcohol, toluene, methanol, isobutyl acetate, ethyl acetate, normal-butyl acetate, ethylene glycol mono-normal-butyl ether, xylene, ethylbenzene, and styrene); (iii) moving heavy objects using nine overhead traveling cranes, with lifting loads of 1–2.8 tons; and (iv) operations at heights of 2 m or more, on the upper parts of the rolling stock. Office B personnel are involved with (i) grinding, polishing, and welding; (ii) operations using toluene, xylene, and ethylbenzene; (iii) operation of overhead traveling cranes; and (iv) operations at height.

Despite the generation of dust and handling of organic solvents, there were multiple violations of the ISH Act and its relevant Ministerial Ordinances: no measurements of the working environment had been performed; no local exhaust ventilation for organic solvents had been installed; no wall-notices about the substances handled had been posted; no spot-inspections of cranes had been performed; and no carrier cables had been set up for high-position operations on the upper parts of the rolling stock. The ISH Act obligates Company P to resolve these issues because it runs Factory Q.

Meanwhile, employees at Office B were instructed to wear personal protective equipment, such as half-face respirators for dust and organic solvents. They also undertook occupational health surveillance relating to organic solvents. The only abnormal finding was increased hippuric acid in some personnel, which was probably caused by the intake of benzoic acid from their diet.

A health supervisor was appointed for Office B, Company A, but the geographical separation meant that he had almost no opportunities to inspect Factory Q, Company P.

Implementation

In November of Year X–1, the former OHP made their first visit to Factory Q and pointed out that there was a legal requirement to measure the working environment.

Fig. 1. Relationship of organizations in this case study and ground plan of Factory Q
A) Organizational structure of this case study, B) Schematic of Factory Q

The then-Head of Office B also notified the Head of Factory Q about the suggestion.

During April of Year X, the Head of Office B was replaced. During September of Year X, the OHP made an inspection visit to Factory Q and found that the occupational health risks in the working environment had not been evaluated for a long time. Dust had accumulated on the floor of the factory, although the amounts of materials that had been handled were small. There was also a smell of organic solvents, so it was probable that the operatives had been substantially exposed to these materials. The OHP therefore submitted the first inspection report, highlighting the issues required by legislation: measurement of the working environment, installation of local ventilation devices, and installation of wall notices where necessary. The Head of Office B asked the foreman at Factory

Q to react to the inspection report.

When Factory Q was inspected again during February of Year X+1, none of the requested measures had been taken, for reasons including Company P's limited budget. The Head of Office B and the OHP discussed the approach required to address the situation. They agreed to issue a second inspection report, making clear that: "If the company continues to ignore the requirements of the legislation, it may be judged that there is a considerable risk to employees' health. In this case, the OHP will make a formal recommendation on the basis of the ISH Act, Article 13, Clause 5".

Following the second inspection report, the Head of Office B consulted the chief executive officer (CEO) of Company A, who sent the CEO of Company P a document requesting improvement of the items in the working

1. The entire company to which this case study relates has more than 1,000 employees, but it was clear that one of the premises to which work was contracted was not appropriately managing the working environment or controlling the chemical substances used. Small businesses may lack personnel with the specialist knowledge and skills to manage control of chemical substances. In this case study, no chemical substance control had been performed for many years. The request was made for appropriate chemical management, and it is hoped that better communication with OHPs will facilitate effective management of the working environment in future.
2. In the manufacturing sector, the principal business has comprehensive control and responsibility for the health and safety of contractors. However, in this case study, their management was unsatisfactory. In general, contracted workers find it difficult to ask the principal business to make improvements in their working environment. However, this study revealed that notice of intention to make a formal recommendation filed by the contractor's OHP was successful in persuading the principal business to improve the working environment. In particular, amendments to the ISH Act in 2018 strengthened the authority of OHPs, increasing the effectiveness of their formal recommendations. It also increased the independence and neutrality of OHPs, which

may have increased the overall effectiveness of a formal recommendation.

3. In this case, the procedure went no further than the OHP notifying the company that they might file a formal recommendation. However, the companies responded as if a formal recommendation had been submitted. In a survey about OHPs' formal recommendations, it was found that these were often issued when the OHP's opinions or instructions had been neglected and the OHP needed to take further action and/or there had clearly been a violation of the legislation^{9,10}. In this case study, the background to the OHP notifying the company that they might issue a formal recommendation included: (i) the significant risk of damage to employees' health; (ii) the violation of laws about working environment management; and (iii) the company's agreement to receive a formal recommendation. According to an amendment to the ISH Act, Article 14, Clause 3, in 2018, when OHPs intend to make a formal recommendation, they should first ascertain the opinions of the company about the details of the formal recommendation. The OHP in this case study followed this amendment, sought the opinions of the company, and canvassed sufficiently beforehand. The procedure went no further than notification because the company responsible for improving the working environment was the principal business, and the OHP intended to reserve the opportunity to issue a formal recommendation for the next step, if no improvement had been made.

Even in the case of small and subcontracting businesses, it is considered that appointment of OHPs, full establishment of their authority, and full provision of information may lead to successful improvement of the working environment, including management of chemicals.

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Conflicts of interest

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