

Investigation into the Proper Disposal of Home Medical Waste

JMAJ 54(5): 271–276, 2011

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Key words Home care, Waste, Home medical waste

Introduction

Promotion of home care

Japan has achieved universal health insurance coverage through a public health insurance system, and the nation enjoys free access to medical care. Different from the situation in other countries, examination by a general physician is not a requirement to receive hospitalized treatment in Japan. Moreover, long-term facility-based recuperation is also treated as medical care. Such care is provided in a hospital or clinic with sickbeds and is covered by public health insurance.

On the other hand, in recent years home care has been promoted even in Japan with the intended purpose of improving patients' quality of life. The background factors include the following.

- 1) The aging of Japanese society is progressing with the estimate that the population aged 65 and older will reach 30.0% in 2023. Also, the creation of a public long-term care insurance system in 2000 resulted in vastly expanded home services.
- 2) There is concern about the increase in patients with lifestyle-related diseases,^{*2} among whom recuperation at home is standard.
- 3) There are diseases, such as cancer, for which the emphasis has shifted from hospitalized to ambulatory care following the establishment of community cooperation and progress in medical technology.

- 4) Since 1981, home care has been appreciated in terms of medical fees, including for self-administered insulin, self-administered peritoneal dialysis, and home visit nursing.
- 5) The government's medical expenses containment policy has resulted in shorter hospital stays and the differentiation of functions in the medical care system. The number of sickbeds^{*3} is on a declining trend while the number of patients transitioning from medical institutions to home care is increasing.

Waste classification

In Japan, the Waste Management and Public Cleansing Law (Waste Management Law) has been enacted as a general legal regulation regarding waste disposal. The law categorizes waste as either industrial waste or municipal solid waste with businesses (commissioned disposal companies) and municipalities being responsible for the management of the former and later, respectively. The law further classifies municipal solid waste and industrial waste each into specially controlled waste and waste that does not require special control in order to prevent harm to human health and the living environment (**Fig. 1**).

With no special law regulating medical waste, the wastes from medical institutions are classified according to the above. In other words, among the wastes from hospitals and clinics, waste alkali, waste plastics, and other wastes specified by a

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*2 For example, it is estimated that 22.1 million people out of Japan's population of approximately 127 million have diabetes. This estimate is based on the sum of the 8.9 million "people strongly suspected of having diabetes" and the 13.2 million "people for whom the possibility of diabetes cannot be precluded."

*3 In Japan, long-term recuperation facilities that are the equivalent of nursing homes in the West are regarded as medical care facilities.

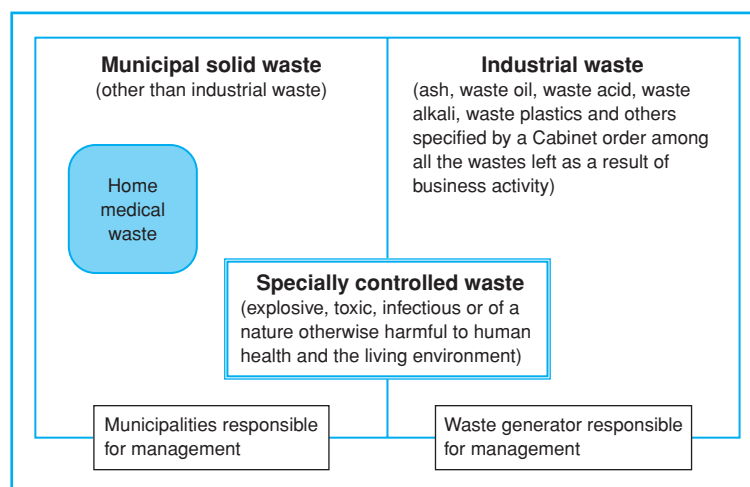


Fig. 1 Waste classification in the Waste Management and Public Cleansing Law

Cabinet ordinance are managed as industrial waste while everything else is handled as municipal solid waste. Likewise, infectious waste, such as cloth and paper used for patients with certain infections and used needles, are treated as specially controlled waste.

Home medical waste

The Waste Management Law classifies residential refuse as municipal solid waste, placing responsibility for its management on municipalities. On the other hand, the law says that, “Businesses shall appropriately manage waste left as a result of their business activities.” This has led to the problem, with the advance of home medical care in recent years, of confusion as to whether home medical waste is municipal solid waste generated by households or industrial waste resulting from the business activities of medical institutions.

Japan’s national government consistently interprets home medical waste as municipal solid waste generated by households.^{*4} In 2005, the Ministry of the Environment, which had taken over the affairs of waste administration from the Ministry of Health and Welfare, issued a notification indicating the following as the most advis-

able management methods at the time:

- 1) Needles and other sharp objects should be taken to a medical institution by medical personnel, the patient or a family member and managed as infectious waste.
- 2) Other non-sharp objects should be managed by the municipality as municipal solid waste.

Based on the premise that municipalities have the responsibility to manage municipal solid waste, the notification accepts a system where by some sharps home medical waste is collected in medical institutions by means of cooperation between individual municipalities and organizations such as local medical associations. However, according to a questionnaire survey conducted by the Ministry of the Environment in February 2007, no more than 31.0% of municipalities collect non-sharps home medical waste in accordance with this management method.

In light of this situation, the Japan Medical Association (JMA) responded to the problem of home medical waste by taking actions such as urging local medical associations to discuss and cooperate on this issue with their municipality and preparing Guidelines for the Handling of Home Medical Waste.

*4 In July 1998, the then Ministry of Health and Welfare expressed in a notification the interpretation that, “since home medical waste is municipal solid waste, municipalities must collect, transport, and dispose of it in accordance with the provisions of the Waste Management Law.” At the same time it suggested that, “if home medical waste is to be collected using methods other than the usual collection methods, [municipalities should] listen thoroughly in advance to explanations of the situation from relevant organizations such as patients groups and municipal medical associations, and obtain their understanding.”

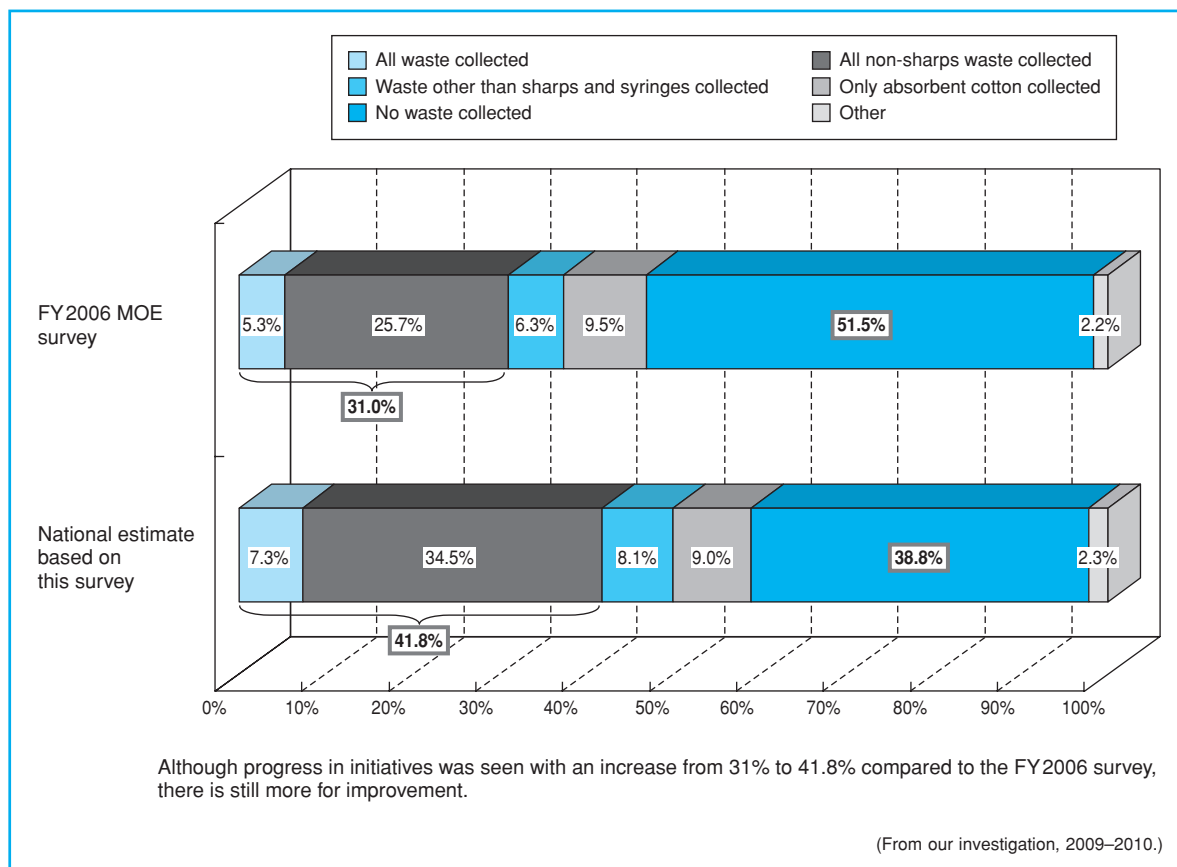


Fig. 2 Collection of home medical waste

Investigation Objectives

In this way, home care has increased in Japan in recent years and has even been encouraged as a national policy. In this situation, the management of home medical waste has become an issue. Under Japan’s legal system municipalities are responsible for the management of residential refuse as municipal solid waste, but it has been revealed that many municipalities are not collecting home medical waste.

In light of the present situation as described above, the JMA and the Japan Industrial Waste Technology Center jointly conducted an investigation into the proper disposal of home medical waste with the aim of contributing to the advancement of initiatives to properly dispose of home medical waste.

Investigation Methods

In December, 2009, the investigation started with a questionnaire survey of 100 municipalities nationwide and their respective municipal medical associations. Questions covered matters such as the progress of the municipalities’ and municipal medical associations’ initiatives to manage home medical waste, problems relating to the management of home medical waste, and their efforts to resolve those problems.

It was followed by an interview survey conducted from May to July in 2010, on a total of 14 municipalities, municipal medical associations, and prefectural governments, focusing mainly on questionnaire respondents. The interviews looked into matters such as how initiatives got started, the detailed contents of initiatives, what made it possible to go forward with home medical waste

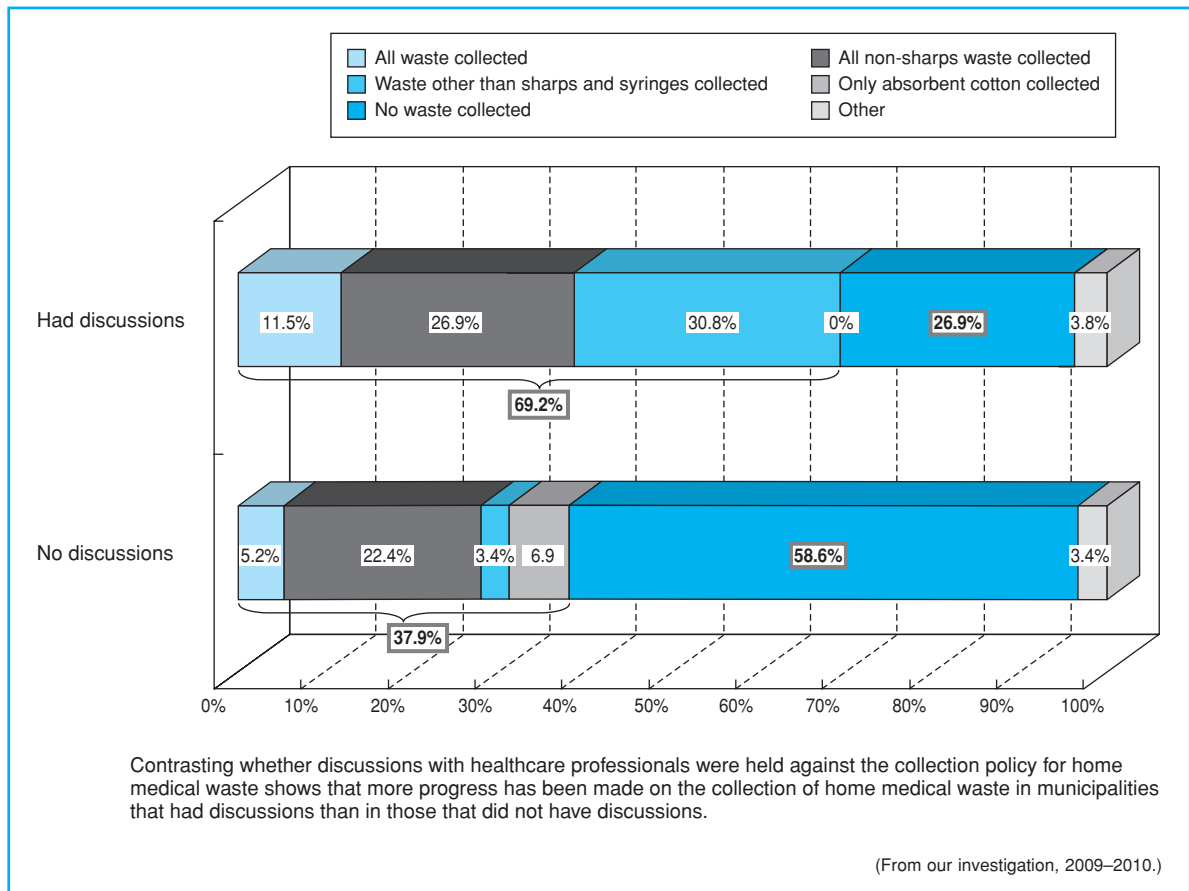


Fig. 3 Association between discussions and the collection policy for home medical waste

initiatives, and impediments to moving forward with those initiatives.

Results and Discussion

The results of the questionnaire survey revealed that although some progress has been made with municipalities’ home medical waste initiatives, 38.8% of municipalities are not collecting home medical waste at all, regardless of whether it is sharps waste or non-sharps waste (Fig. 2). Of particular note, psychological resistance to the collection of home medical waste in municipalities was confirmed to be strong. Moreover, 62.7% of municipalities responded that they have not held discussions with healthcare professionals such as medical associations, and no efforts had been made to work out differences in thinking between municipalities and medical associations.

In contrast, the interview survey discovered instances in which, “Although there were differences of opinion between the municipality and the medical association in the beginning, we were able to resolve them through repeated discussions,” “The medical association was able to dispel the erroneous image of pen needles as dangerous items by showing actual pen needles to the municipality staff and explaining them,” and “By holding discussions with healthcare professionals, the municipality was able to start managing home medical waste (i.e. the municipality was able to fulfill its responsibility to manage waste).”

Questionnaire results

A questionnaire survey was conducted on 100 municipalities and the 113 municipal medical associations corresponding to those municipali-

ties. (Responses: 141/213; response rate: 66.2%)

According to the survey results, 41.8% of municipalities were collecting all non-sharps home medical waste. However, 38.8% of municipalities are still collecting no home medical waste at all (**Fig. 2**).

Further, in light of the fact that municipalities have the responsibility to manage municipal solid waste, they need to proceed with the management of home medical waste with the understanding of healthcare professionals. However, 62.7% of municipalities responded that they “have not held” discussions with healthcare professionals about this problem. In the case of municipalities that had held discussions, 38.4% were “collecting all waste other than sharp objects,” and 69.2% were “collecting all waste other than sharps and syringes” (**Fig. 3**). In the case of municipalities that had not held discussions, on the other hand, this number was no more than 37.9%. According to the survey of medical associations, in 61.1% of cases the “medical association proposing discussions to the municipality” was the catalyst that got discussions with the municipality going.

Regarding the issue of the management of home medical waste in municipalities, the most prevalent response on the fiscal 2006 survey conducted by the Ministry of the Environment was that there was not enough information regarding home medical waste. On the current questionnaire survey, however, there were no such responses, suggesting that the Guidelines on the Promotion of Initiatives relating to the Management of Home Medical Waste prepared by the Ministry of the Environment in 2008 and the Guidelines for the Handling of Home Medical Waste (2008) prepared by the JMA have helped raise municipalities’ awareness of home medical waste.

However, 69.3% of municipalities responded that they cannot dispel the psychological resistance felt when managing home medical waste, suggesting that psychological resistance to home medical waste is an impediment to making initiatives.

Regarding management responsibility (desirable party responsible for management implementation), 52.4% of municipalities responded that “medical care providers should manage” all home medical waste. On the other hand, 14.8% of medical associations responded that “municipalities should manage” all home medical waste.

Regarding the burden of management expenses, 57.8% of municipalities responded that “medical care providers should pay,” whereas 18.8% responded that “municipalities should pay.” On the other hand, 51.1% of medical associations responded that “municipalities should pay,” while 38.3% responded that “medical care providers should pay.”

Also of note, medical associations and medical institutions pointed to the “burden of management expenses” as the most prevalent (90.9%) specific point that is a problem in the management of home medical waste.

Interview results

An interview survey was conducted on 14 stakeholders (municipalities, municipal medical associations, and prefectural governments). The interviews probed topics such as how initiatives relating to the management of home medical waste got started, the detailed contents of initiatives, what made it possible to go forward with initiatives, and impediments to moving forward with initiatives.

Among the municipalities that were interviewed, those that were reluctant to manage home medical waste gave responses that showed strong psychological resistance to the management of home medical waste. Regarding management responsibility, those municipalities that were reluctant to manage home medical waste held the opinion that home medical waste is essentially business-related waste generated by medical institutions and so management responsibility should be born by medical institutions. Conversely, municipalities that were positive about managing home medical waste responded that home medical waste is generated by households and falls under the category of residential municipal solid waste.

In this way, it would appear that municipalities’ psychological resistance to the management of home medical waste and their view of management responsibility influences willingness to make initiatives.

There were also examples of medical associations and municipalities working together to carry out initiatives on the management of home medical waste, including the preparation of a pamphlet under the name of both the municipal medical association and the municipality, the establishment of a new collection route for pen needles

(with the involvement of the medical association in the collection work and the municipality paying for all management expenses), and the signing of an agreement between a municipal medical association and a municipality. In each case, the initiatives seemed forward-looking.

Additionally, there was an instance in which a medical association provided information to the municipality and took other steps to dispel the municipality's psychological resistance, leading to the municipality collecting home medical waste. In another case, the prefectural medical association's urging of the prefectural government resulted in significant progress in home medical waste initiatives on the part of municipalities within the prefecture due to the prefectural government leading examination of the issue.

Summary

In Japan, reform of the social security system coupled with further progress in the aging of society and the securing of revenue sources such

as consumption tax is being debated. In addition, compensation is expected to be simultaneously revised under public medical insurance and public long-term care insurance in 2012. In this time of reform, it is presumed that home care will be further promoted.

Discussion and cooperation between municipalities and municipal medical associations, which are the representative of local healthcare professionals, are essential to resolve the problem of home medical waste. The JMA will use this investigation report to continue efforts to contribute to appropriate management of home medical waste.

Acknowledgements

This investigation was conducted jointly with the Japan Industrial Waste Technology Center with a grant from the Yuumi Memorial Foundation for Home Health Care. The author appreciates the assistance provided by Mr. Kazuhiro Fujmaki, Mr. Katsuhito Aoki, and Mr. Naoto Tsuchiya, of the Community Healthcare Division of the Japan Medical Association in completing this paper.