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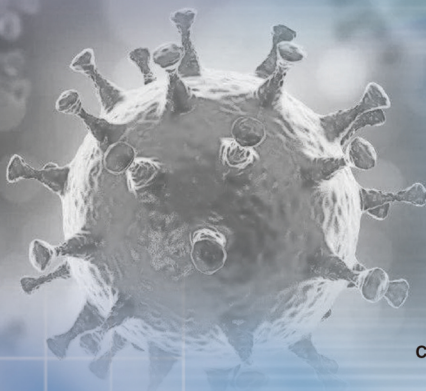


Research Results of Foreign Environmental Cooperation Center, Ministry of Ecology and Environment of China
Series of Books on the Implementation of International Environmental Conventions
Project Output of United Nations Industrial Development Organization


100 Q&A on the Standardized Management of Medical Waste for Medical Institutions in China

Editor Health Commission of Henan Province

Translators Foreign Environmental Cooperation Center, Ministry of Ecology and Environment of China
Health Commission of Henan Province



Central China Publishing & Media Group Ltd.
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 Henan Science and Technology Press



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The original Chinese Edition of the book was compiled by the Health Commission of Henan Province. The editorial board is listed in the following page. This English edition was developed and edited by Mr. Ren Zhiyuan (FECO), Ms. Fan Qiuping (First Affiliated Hospital of Zhengzhou University) and Ms. Qin Mingyu (FECO, executive editor), translated by Ms. Qin Mingyu (Q1-Q51), Mr. Zheng Zhe (Q52-69), and Mr. Ren Zhiyuan (Q70-Q100), and revised by Ms. Qin Mingyu and Mr. Cao Xudong.

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Preface to the English Version

Medical waste refers to the directly or indirectly infectious, toxic, and other hazardous waste generated by medical and health institutions in medical treatment, prevention, health care and other relevant activities. Carrying out standardized management of medical waste is of great significance to the overall implementation of strategic plan for a healthy China, the effective maintenance of people's health and environmental safety, the acceleration of construction of ecological civilization, and the promotion of sustainable economic and social development.

In order to fight and win the battle against the epidemic by mobilizing all resources, and blocking the spread of the virus, carry out the management of medical waste during the epidemic, and further strengthen the standardized management of medical waste in medical institutions, the Health Commission of Henan Province promptly organized experts to compile the *100 Q&A on the Standardized Management of Medical Waste for Staff of Medical Institutions in China* which was then included as an important part in the *100 Q&A on the Standardized Management of Medical Waste for Staff of Medical Institutions and Selected Relevant Laws, Regulations and Rules in China* and published. The book is based on the national laws, regulations and rules on medical waste management, takes the form of Q&A to extract and sort out the relevant regulations and requirements in the process of medical waste management in medical institutions, and answers the doubts and questions in the actual management work, providing clear and professional guidance for clinical frontline medical personnel on their daily work and emergency treatment.

The virus knows no borders and the epidemic does not discriminate between races. Human beings are a community of shared future. The international community can defeat the epidemic only by uniting and cooperating with each

other. With the drastic changes in the global epidemic situation, China put forward the initiative of “A resolute all-out global war against the COVID-19 outbreak” at the G20 special summit. China is willing to share its beneficial practices of prevention and control of epidemic with other countries and provide assistance within its capabilities for countries where the epidemic spreads. In order to promote the transformation of China’s experience in effectively dealing with the management of medical waste during epidemic into powerful weapons for other countries to fight against the epidemic, the Foreign Economic Cooperation Office of Ministry of Ecology and Environment of China coordinated the unit that has compiled the Chinese Version to jointly compile the English version of the book with the help and support of relevant experts from the health departments. In this global fight against epidemic, we believe the publication of this book will play a positive role in helping global citizens to win the final victory.

Compiler
April 2020

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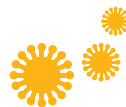
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1

What laws and regulations promulgated in China are related to the management of medical waste?

In China, laws related to the management of medical waste include: Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases, Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes, and Environmental Protection Law of the People's Republic of China, and Law of the People's Republic of China on the Prevention and Control of Occupational Disease.

In China, regulations related to the management of medical waste include: Regulations on the Management of Medical Waste and Regulations on the Control over Safety of Dangerous Chemicals, and Regulations on the Bio-Safety Management of Pathogenic Microbe Labs.

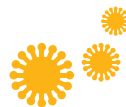


2

**According to what laws is Regulations on the Management of Medical Waste formulated?
What is the significance of its promulgation and implementation?**

Regulations on the Management of Medical Waste is formulated in accordance with Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases and Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes.

The significance of the promulgation and implementation of Regulations on the Management of Medical Waste is to strengthen the safety management of medical waste generated by medical institutions, prevent the spread of diseases, protect the environment, and guarantee human health.



3

What does “medical waste” refer to in Regulations on the Management of Medical Waste? What categories is medical waste divided into?

In Regulations on the Management of Medical Waste, medical waste refers to the waste with direct or indirect infectivity, toxicity, and other hazards generated by medical and health institutions in medical treatment, prevention, health care and other relevant activities.

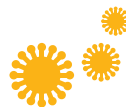
Medical waste is divided into five categories: infectious waste, pathologic waste, injury waste, drug waste, and chemical waste.



4

What is the scope of application of Regulations on the Management of Medical Waste?

Regulations on the Management of Medical Waste shall apply to the activities of collection, transport, storage, transfer, and supervision and management of medical waste generated by medical institutions; the household garbage generated by infectious patients or suspected infectious patients treated by medical institutions shall be managed and transferred as medical waste; the management of anesthetic, psychotropic, radioactive, and toxic drugs and related waste discarded by medical institutions shall be carried out in accordance with relevant laws, administrative regulations, rules and standards of the state.



5

What do the departmental rules for the management of medical waste include?

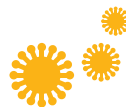
Departmental rules related to the management of medical waste include: Measures for the Management of Medical Waste in Medical and Health Institutions formulated by the former Ministry of Health, and Administrative Punishment Measures for the Management of Medical Waste, and Management Measures for the Duplicate Tables for the Transfer of Hazardous Waste enacted by the former State Environmental Protection Administration.



6

What main supporting documents published by the former Ministry of Health and the former State Environmental Protection Administration are related to the management of medical waste?

The main supporting documents related to the management of medical waste published by the former Ministry of Health and the former State Environmental Protection Administration include: Measures for the Management of Medical Waste in Medical and Health Institutions; Classified Catalogue of Medical Waste; Standard of Packaging Bags, Containers and Warning Symbols Specific to Medical Waste; Administrative Punishment Measures for the Management of Medical Waste; Technical Specifications for Centralized Disposal of Medical Waste.



7

According to what document do medical institutions implement classified management of medical waste?

Medical institutions implement classified management of medical waste according to Classified Catalogue of Medical Waste (WYF [2003] No. 287) issued by the former Ministry of Health and the former State Environmental Protection Administration.

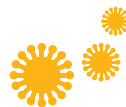


8

What is infectious waste? What does it mainly include?

Infectious waste refers to the kind of medical waste that carries pathogenic microorganisms and has the hazard of leading to the spread of infectious diseases.

Infectious waste mainly includes: articles contaminated by patients' blood, body fluid or excrement; household garbage generated by isolated infectious patients or suspected infectious patients treated by medical institutions; pathogen culture medium and specimens, preservation solution of strains and virus seed discarded by pathogenic microorganism laboratories, as well as various discarded medical specimens; discarded blood and serum; used disposable medical supplies and disposable medical devices.



9

What is injury waste? What does it mainly include?

Injury waste refers to discarded sharp medical instruments that could stab or cut human body.

Injury waste mainly includes: medical needles, suture needles, scalpels, surgical knives, skin preparation knives, surgical saws, glass slides, glass test tubes, and glass ampoules.

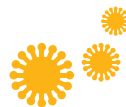


10

What is pathologic waste? What does it mainly include?

Pathologic waste refers to human body waste generated during diagnosis and treatment as well as animal carcasses from medical experiments.

Pathologic waste mainly includes: discarded human tissue and organs generated during surgeries and other diagnosis and treatment processes; animal tissue and carcasses from medical experiments; human tissue and pathologic wax blocks discarded after pathologic sections.



11

What is drug waste? What does it mainly include?

Drug waste refers to discarded drugs that are expired, eliminated, deteriorated or contaminated.

Drug waste mainly includes: discarded common drugs, discarded cytotoxic drugs and genotoxic drugs, and discarded vaccines and blood products.

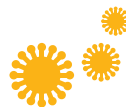


12

What is chemical waste? What does it mainly include?

Chemical waste refers to waste chemical articles that are toxic, corrosive, flammable and explosive.

Chemical waste mainly includes: discarded chemical reagents from medical imaging department, pathology department and laboratories, discarded chemical disinfectants such as peroxyacetic acid and glutaraldehyde, as well as discarded medical instruments and articles containing heavy metals such as mercury sphygmomanometer and mercury thermometer.



13

According to what law is National Catalogue of Hazardous Waste enacted? What are the characteristics of the hazardous waste listed in this catalogue?

National Catalogue of Hazardous Waste is enacted in accordance with provisions of Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes.

Hazardous waste listed in National Catalogue of Hazardous Waste refers to solid wastes and liquid wastes matching any of the following conditions:

(1) With one or more such hazardous properties as corrosivity, toxicity, inflammability, reactivity or infectivity.

(2) Not excluding the possibility of having hazardous properties, may have harmful impacts on the environment or human health, and need to be managed as hazardous waste.

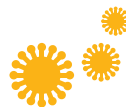
Medical waste is a kind of hazardous waste.



14

According to what documents shall medical institutions carry out the management of medical waste during the novel coronavirus pneumonia epidemic?

Medical institutions shall carry out the management of medical waste during the novel coronavirus pneumonia epidemic according to requirements of such documents as Notification on the Management of Medical Waste in Medical Institutions during the Novel Coronavirus Pneumonia Epidemic (GWBYH [2020] No. 81), and Notification on the Issuance of the Work Plan for the Comprehensive Control of Waste in Medical Institutions (GWYF [2020] No.3).



15

What are the requirements in Notification on the Management of Medical Waste in Medical Institutions during the Novel Coronavirus Pneumonia Epidemic for medical institutions to carry out the management of medical waste during the epidemic?

Notification on the Management of Medical Waste in Medical Institutions during the Novel Coronavirus Pneumonia Epidemic requires medical institutions to: implement the main responsibilities as medical institutions, strengthen the classified collection of medical waste, and enhance the transport and storage of medical waste.



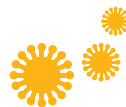
16

What are the requirements in Notification on the Management of Medical Waste in Medical Institutions during the Novel Coronavirus Pneumonia Epidemic regarding implementing the main responsibilities as medical institutions?

(1) Medical institutions shall attach great importance to the management of medical waste during the novel coronavirus pneumonia epidemic and earnestly implement the main responsibilities. The legal representative of medical institutions is the first person responsible for the management of medical waste and the specific departments and operation staff that generate medical waste are the direct persons responsible.

(2) Medical institutions that socialize logistics services shall strengthen the management of institutions and personnel that provide logistics services, organize training, and urge them to master the basic requirements for the management of medical waste and genuinely perform their duties.

(3) Medical institutions shall make efforts to clean up the environment, dispose of medical waste in time, avoid the accumulation of various waste, and strive to create a healthy and hygienic environment.



17

What are the requirements in Notification on the Management of Medical Waste in Medical Institutions during the Novel Coronavirus Pneumonia Epidemic regarding strengthening the classified collection of medical waste?

(1) Clarify the scope of classified collection. The waste generated in fever clinics and inpatient areas (wards) of medical institutions during the diagnosis and treatment of COVID-19 patients and suspected COVID-19 patients, including medical waste and household garbage, shall be classified and collected as medical waste.

(2) Standardize packaging containers. The outer surfaces of packaging bags and sharps boxes specifically for medical waste shall be labeled with warning marks. Before putting in medical waste, careful inspection shall be carried out to ensure that there is no damage or leakage. Medical waste collection bin (or container) shall be equipped with a foot pedal and a cover. When medical waste fills 3/4 of the packaging bag or sharps box, it shall be sealed effectively and tightly. Double-layer packaging bags shall be used to contain medical waste. Gooseneck-type sealing shall be adopted and each layer shall be sealed separately.

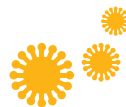
(3) Ensure safety collection. Timely classify and collect medical waste by category and ensure personnel safety to control infection risks. When the outer surface of the packaging bag and sharps box containing medical waste is contaminated by infectious waste, an extra layer of packaging bag shall be used. When classifying and collecting used disposable isolation gowns and protective suits, squeezing is strictly prohibited. Each packaging bag and sharps box shall be attached or pasted with a label in Chinese, on which there shall show the unit,



department and date of generation as well as the category of the medical waste, and it shall be marked with “ 新型冠状病毒感染的肺炎 ” (“Novel Coronavirus Pneumonia” in English) or abbreviated as “ 新冠 ” (“COVID-19” in English) on the special notes.

(4) Treat by area. The medical waste generated in potentially contaminated areas and contaminated areas of fever clinics and inpatient areas (wards) for COVID-19 patients and suspected COVID-19 patients shall be covered with a layer of medical waste packaging bag before leaving the contaminated areas; the medical waste generated in the non-contaminated areas shall be disposed as conventional medical waste.

(5) Ensure the disposal of pathogen specimens. Highly hazardous waste such as specimens containing pathogens and related preservation fluid in medical waste shall be treated by steam sterilization at the place where it is generated before being collected and disposed as infectious waste.



18

What are the requirements in Notification on the Management of Medical Waste in Medical Institutions during the Novel Coronavirus Pneumonia Epidemic regarding enhancing the transport and storage of medical waste?

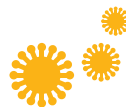
(1) Manage the safety transport. Before transporting medical waste, the identifications, labels and seals of the packaging bags or sharps boxes shall be checked to see if they meet the requirements. When transporting medical waste, transport staff shall prevent the special packaging bags and sharps boxes containing medical waste from damage, keep off the medical waste from directly contacting their bodies, and avoid the leakage and spread of medical waste. At the end of each day's transport, transport tools shall be cleaned and disinfected with 1,000 mg/L chlorine-containing disinfectant. If the transport tools are contaminated by infectious medical waste, they shall be disinfected in time.

(2) Standardize the storage and transfer of medical waste. The temporary storage place for medical waste shall be tightly shut with management staff to prevent non-staff from touching medical waste. Medical waste shall be stored in a separate area at the temporary storage place and transferred to medical waste disposal units for disposal as soon as possible. Use 1,000 mg/L chlorine-containing disinfectant to disinfect the ground of the temporary storage place for medical waste twice a day. Layer-by-layer registration and transfer shall be carried out between medical waste generation departments, transport personnel, staff at the temporary storage place and transfer personnel of the medical waste disposal unit and it shall be clarified that the medical waste is from COVID-19 patients or suspected COVID-19 patients.

(3) Ensure transfer registration. The management of duplicate tables



for the transfer of hazardous waste shall be strictly implemented to register medical waste. The content of registration includes the source, category, weight or quantity, transfer time, final destination of the medical waste as well as the signatures of responsible persons for the transfer, with a special note writing “新型冠状病毒感染的肺炎” (“Novel Coronavirus Pneumonia” in English) or “新冠” (“COVID-19” in English). The registration documents shall be kept for 3 years.



19

According to what documents shall medical institutions carry out emergency treatment of medical sewage during the novel coronavirus pneumonia epidemic?

(1) Medical institutions shall ensure standardized treatment of medical sewage according to Notification on the Supervision of Medical Sewage and Urban Sewage during the Novel Coronavirus Pneumonia Epidemic (HBSTH [2020] No.52) to prevent the novel coronavirus from spreading through sewage and effectively carry out the treatment of medical sewage from medical institutions.

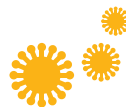
(2) Medical institutions shall manage and control COVID-19 medical sewage as sewage generated by infectious disease medical institutions according to the requirements of Technical Plan for the Emergency Treatment of Medical Sewage Contaminated by Novel Coronavirus (for Trial Implementation). Medical institutions shall strengthen sterilization and disinfection to ensure various indexes such as the number of fecal coliforms in the effluent meet requirements of Discharge Standard of Water Pollutants for Medical Organization(GB 18466—2005).



20

According to what documents shall medical institutions classify, collect, and treat sewage and waste during the novel coronavirus pneumonia epidemic?

Medical institutions shall strictly implement Discharge Standard of Water Pollutants for Medical Organization (GB 18466—2005) and classify, collect and treat sewage and waste according to requirements of Technical Guidance for Hospital Sewage Treatment (HF [2003] No.197), Engineering and Technical Specifications for Hospital Sewage Treatment (HJ 2029—2013) and Technical Plan for the Emergency Treatment of Medical Sewage Contaminated by Novel Coronavirus (for Trial Implementation), so as to ensure stable and standardized discharge.



21

What problems shall medical institutions pay attention to in the emergency treatment of medical sewage during the novel coronavirus pneumonia epidemic?

(1) Medical institutions shall strengthen classified management and strictly prevent contamination from spreading.

(2) During the emergency treatment of sewage, medical institutions shall strengthen the control and management of waste and sludge discharge in sewage treatment stations to prevent pathogens from transferring among different media.

(3) It is forbidden to directly discharge sewage or discharge the sewage that does not meet the standard.

(4) Infectious solid wastes and various chemical liquid wastes shall not be discarded or dumped into sewers.

(5) The sewage treatment works located indoors shall be equipped with mandatory ventilation equipment.

(6) Workers shall be provided with work clothes, medical latex gloves, face shields, goggles, gas masks and first-aid appliance.

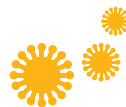


22

What are the requirements for the contact time, the amount residual chlorine and the number of fecal coliforms in the disinfecting tank, when medical institutions use liquid chlorine, chlorine dioxide, sodium chlorate, bleaching powder or Calcium hypochlorite with an effective chlorine dosage of 50mg/L for disinfection in the emergency treatment of medical sewage during the novel coronavirus pneumonia epidemic?

(1) The contact time in the disinfecting tank shall be 1.5 hours or more; the amount of residual chlorine shall be more than 6.5 mg/L (based on free chlorine); and the number of fecal coliforms shall be less than 100 /L.

(2) If the contact time is 1.0 hour due to the limited capacity of the existing chlorination disinfection facilities, the amount of residual chlorine shall be more than 10 mg/L (based on free chlorine), the effective chlorine dosage shall be 80 mg/L for reference and the number of fecal coliforms shall be less than 100/L; if the contact time is less than 1.0 hour, the amount of chlorine dosage and residual chlorine shall be appropriately increased.



23

What are the requirements for the suspended matter concentration of sewage, the contact time, the dosage, the removal rate of coliform bacteria and the number of fecal coliforms, when medical institutions use ozone generator for disinfection in the emergency treatment of medical sewage during the novel coronavirus pneumonia epidemic?

When using ozone generator for disinfection, the suspended matter concentration of sewage shall be less than 20 mg/L, the contact time shall be more than 0.5 hour, the dosage shall be over 50 mg/L, the removal rate of coliform bacteria shall be 99.99% or more, and the number of fecal coliforms shall be less than 100 /L.



24

What are persistent organic pollutants? What are their characteristics? Briefly describe their environmental persistence, bioaccumulation, long-distance transport capability and high toxicity.

(1) Persistent organic pollutants (POPs) refer to organic chemical substances that persist in the environment, have a long half-life, are transported long distances through environmental media such as air, water and organisms, can accumulate through food chains (Webs), and have adverse effects on human health and the environment.

(2) POPs have four characteristics:

① Environmental persistence: POPs are very stable in structure, have strong resistance to various effects such as light, heat, microorganisms, and biological metabolic enzymes, and are difficult to degrade under natural conditions. POPs can persist in water, soil, sediment and other environmental media as well as organisms for a long time.

② Bioaccumulation: POPs are characterized by low water solubility and high fat solubility. After they are ingested by organisms through various ways, they will accumulate in the adipose tissue of organisms and thus “bioaccumulate”.

③ Long-distance transport capability: POPs are semi-volatile, allowing them to enter the atmosphere through steam and realize long-distance transport along with atmospheric flow, resulting in global pollution spread.

④ High toxicity: POPs can lead to “three consequences” (meaning POPs are carcinogenic, teratogenic and mutagenic). Ingestion of or exposure to POPs by humans and animals through diet and environmental pollution may lead to serious negative impacts on reproductive, genetic, immune, neurological and endocrine systems.



25

What ecological toxicity do POPs have?

- (1) POPs can inhibit the function of organism's immune system.
- (2) POPs are a kind of endocrine disruptor that can combine with estrogen receptor to affect receptor activity, thus changing gene composition.
- (3) POPs can lead to reproductive disorder, malformation, organ enlargement, and organism death; they can also affect the growth and development of human, especially the intellectual development of children.
- (4) POPs can promote tumor growth and have obvious carcinogenic effect.
- (5) In addition, POPs can also cause increased incidence of chronic obstructive pulmonary diseases, liver fibrosis, digestive dysfunction, skin toxicity, and mental and psychological diseases.

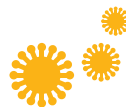


26

What is dioxin? What are its toxic characteristics?

Dioxin is a general term for poly-chlorinated dibenzo-p-dioxins (PCDD), poly-chlorinated dibenzo-furans (PCDF), and PCDD/PCDF. The sources of dioxin include: incomplete combustion and pyrolysis including combustion of municipal waste and medical waste, use of chlorine-containing compounds, and the chlor-alkali industry.

Dioxin, difficult to decompose or exclude, strongly toxic and hard to treat in case of intoxication, is one of the most toxic substances known in the world.



27

What is the Stockholm Convention? What is its core content?

(1) The full name of the Stockholm Convention is the Stockholm Convention on Persistent Organic Pollutants (hereinafter referred to as the POPs Convention). It is an important international environmental convention jointly signed by the international community, concerning the severe harm that POPs may cause to all mankind, to eliminate and reduce the generation and emission of POPs and protect the environment and human health against the hazard.

The Convention was signed at the International Convention Conference held in Sweden on May 22–23, 2001. China is one of the contracting parties to the POPs Convention. On November 11, 2004, the Convention entered into force for China.

(2) One of the core content of the POPs Convention is to take immediate actions to reduce and eventually eliminate the first batch of 12 kinds of toxic POPs listed under global control, including two kinds of POPs unintentionally produced by human beings, namely PCDD and PCDF.

The Convention lists the burning of medical waste as one of the important sources of dioxin-like POPs. It is one of the priorities of all Parties to the POPs Convention to use the Best Available Techniques (BAT) and the Best Environmental Practices (BEP) to treat medical waste and reduce POPs emissions.



28

What is the core concept of BAT/ BEP requirements for the management and disposal of medical waste?

The core concept of BAT/BEP requirements for the management and disposal of medical waste is to focus on the “three aspects” of medical waste, i.e. “reduction”, “hazard-free treatment” and “recycling”.

(1) Reduction: there must be clear definitions for household garbage and medical waste; reusable medical supplies shall be used as much as possible in the normal work of medical institutions; the medical waste that can be recycled shall be placed separately by category to reduce the amount of medical waste debris at disposal terminals.

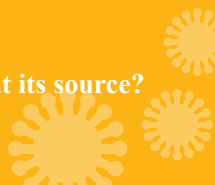
(2) Hazard-free treatment: the principle of on-site disposal shall be applied to medical waste that can be disposed in the place of generation; all disposal technologies shall adhere to the principle of minimum emission of pollutants so that the comprehensive environmental impact of medical waste after disposal shall be minimal.

(3) Recycling: polymeric plastics and rubber products, metal products and glass products of medical waste are the primary targets in the recycling list.



29

Why shall medical waste be reduced at its source?



Reducing at the source of medical waste can effectively prevent household garbage from being mixed into medical waste, so as to reduce the generation and final disposal of medical waste and the release of POPs.

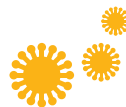


30

What are the hazards of medical waste incineration?

At present, one of the important final disposal methods of medical waste in China is still incineration. PCDD, PCDF, hexachlorobenzene (HCB) and polychlorinated biphenyls (PCB) are all chemicals unintentionally formed and released during heat treatment involving organic substances and chlorine, which are all caused by incomplete combustion or chemical reaction. Medical waste incineration is one of the important factors for the generation of POPs and also one of the important discharge sources.

Reducing the amount of medical waste incineration and improving the incineration quality can cut down the discharge of the above-mentioned harmful substances and reduce their harm to human health.



31

What are the categories of household garbage generated in medical institutions?

The document Notification on Promoting Classified Management of Household Garbage in Medical Institutions (GWBYF [2017] No.30) issued by the National Health Commission of the People's Republic of China and other 7 departments stipulates that household garbage generated in medical institutions is divided into four categories according to their attributes: hazardous waste, perishable waste, recyclable waste and other waste.



32

Are used disposable medical devices a kind of medical waste?

According to relevant provisions of Classified Catalogue of Medical Waste (WYF [2003] No.287) and Notification on Clarifying Issues Related to Medical Waste Classification (WBYF [2005] No.292) issued by the former Ministry of Health and the former State Environmental Protection Administration, used disposable medical devices, regardless of whether their needles are cut off or whether contaminated by body fluid, blood or excrement of patients, are a kind of medical waste and shall be managed as medical waste.



33

What are the requirements of classified management for used infusion bottles (bags)?

Medical institutions shall abide by requirements of such documents as Notification on Promoting Classified Management of Household Garbage in Medical Institutions (GWYB [2017] No.30) and follow the principle of “closed-loop management, fixed point and orientation, and full-course tracing” to define the supervisory responsibilities of relevant competent departments and departments of generation within medical institutions. The requirements of classified management for used infusion bottles (bags) in medical institutions are as follows:

(1) Infusion bottles (bags) that are not contaminated by patient’s blood, body fluid or excreta shall be collected and stored separately after the infusion tube is removed from the joint. The removed infusion tube and needles shall be treated strictly as medical waste, and it is strictly prohibited to mix them into uncontaminated infusion bottles (bags) and other household garbage.

(2) Infusion bottles (bags) containing a small amount of diluted common liquid medicine can be treated as uncontaminated infusion bottles (bags). Medical institutions shall use drugs in a scientific, standardized and economical way, improve use efficiency, cut down waste, and reduce drug consumption and environmental stress.

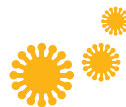
(3) Infusion bottles (bags) under the following circumstances shall not be managed as recyclable household garbage even if they are not contaminated by blood, body fluid or excreta of patients.



① Infusion bottles (bags) used in infectious areas, or for infectious patients or suspected infectious patients, or for other patients taking isolation measures, shall be managed as infectious medical waste.

② Infusion bottles (bags) involving the use of cytotoxic drugs (such as tumor chemotherapy drugs) shall be managed as drug waste.

③ Infusion bottles (bags) involving the use of narcotic drugs, psychotropic drugs, precursor drugs and radioactive drugs, shall be strictly managed in accordance with relevant provisions.



34

According to the requirements of what documents shall medical institutions handle placentas after delivery?

Medical institutions shall follow the requirements in Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases, Regulations on the Management of Medical Waste, as well as Measures for the Management of Medical Waste in Medical and Health Institutions and Reply on the Handling of Placenta after Delivery (WZFF [2005] No.123) by the former Ministry of Health to handle placentas after delivery.

(1) The placenta after delivery shall be owned by the puerpera. If the delivery woman gives up or donates the placenta, it can be disposed by medical institutions. No unit or individual shall buy or sell placentas.

(2) If the placenta may cause the spread of infectious diseases (meaning placentas of delivery women with infectious diseases or suspected infectious diseases, or placentas from precipitate labors), medical institutions shall inform the delivery woman in time, sign the informed consent form with the puerpera, and dispose of the placenta as medical waste.

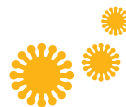


35

What kind of harm does medical waste do to human body? What are the main causes of harm?

(1) Harm of medical waste to human body usually refers to that contact with medical waste may cause injuries and diseases, mainly infectious diseases. The contact includes direct contact and indirect contact.

(2) The main causes of harm are: biological factors (such as microorganisms), physical factors (such as radioactivity), chemical factors (such as poisons and drugs), mechanical factors (such as sharp instruments) and other factors. It also includes POPs generated during the treatment of medical waste.



36

What are the main types of harm that medical waste may cause to human body?



There are mainly five types of harm that medical waste may cause to human body:

(1) Infectious waste, pathologic waste and sharp medical instruments may cause infectious diseases and even epidemic infectious diseases, such as hepatitis B, hepatitis C and AIDS.

(2) Genotoxic waste and radioactive waste may cause gene mutation leading to hereditary diseases.

(3) Drug waste and chemical waste may result in drug poisoning and chemical damage.

(4) Radioactive waste may cause radioactive diseases.

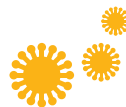
(5) Pressure vessels and sharps may cause physical damage.



37

What is the object that medical waste does harm to?

The object that medical waste does harm to refers to anyone contacting (exposed, directly and indirectly contact) medical waste who may be exposed to potential threats, including the staff of and visitors to medical institutions that produce medical waste, people contacting medical waste during home health care, the exposed people caused by ineffective management of medical waste, as well as the public exposed to POPs generated by the heat treatment of medical waste.



38

What are the main sources of chlorine-containing medical waste in medical institutions?

Chlorine-containing medical waste in medical institutions mainly comes from polyvinyl chloride (PVC) plastics, chlorine-containing disinfectants and chlorine-containing drugs.



39

What are the characteristics of chlorine-containing organic substances that pose a serious threat to human?

Chlorine-containing organic substances pose a serious threat to human in the following four aspects:

(1) They persist in the environment, have a long half-life, and can exist for several years or even decades.

(2) They are highly toxic and have strong teratogenic, carcinogenic and mutagenic effects even at microgram (μg) level, damaging the reproductive function and other body functions of animals.

(3) They are semi-volatile, capable of long-distance transport in air and water, causing global pollution.

(4) They obviously accumulate in the food chain. Due to their hydrophobic nature, they are extremely easy to accumulate in the fatty layer and through the amplification of the food chain, and they can reach a relatively high concentration to be toxic in carnivores.



40

What is high polymer waste? What supplies are mainly included in this category in medical institutions?

High polymer waste refers to solid, liquid, gas and other waste with multi-base, extremely complex components and chemical structures, and even containing flame-retardant elements.

High polymer waste generated in medical activities of medical institutions includes: plastics, latex, rubber and non-woven fabrics, which are mainly disposable medical devices and supplies. High polymer waste is a kind of high polymer material.

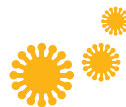


41

What are the main types of medical high polymer materials used in medical activities of medical institutions? What do these materials mainly include according to the classification by elemental structure of molecular backbone?

High polymer materials used in medical activities of medical institutions mainly include artificial organs, medical devices and auxiliary materials for pharmaceutical preparations.

Medical high polymer materials used for manufacturing artificial organs, medical devices and auxiliary materials for pharmaceutical preparations, according to the classification by element structure of molecular backbone, mainly include: polyvinyl chloride, natural rubber, polyethylene, polyamide, polypropylene, polystyrene, silicone rubber, polyester, polytetrafluoroethylene, polymethyl methacrylate and polyurethane.



42

What are the characteristics of high polymer waste?

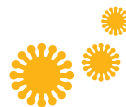
Generally, high molecular polymer is safe and nontoxic, but almost all plastic products are added with certain additives to improve the plasticity and strength, thereby meeting various performance requirements of plastic products; it also leads to slow hydrolysis and photolysis rates, making plastic products a kind of degradation-resistant organic pollutant. Plastic products contaminate air, dust fall, living beings, food, water and soil, remain in river sediment, urban sludge and other media, and can generate a large amount of POPs during incineration.



43

What treatment technologies shall be adopted by centralized disposal units for medical waste to treat high polymer waste?

Centralized disposal units for medical waste shall adopt non-incineration treatment technologies to treat polymer waste, including high-temperature steam treatment technology, microwave treatment technology, chemical treatment technology and plasma treatment technology.



44

What are the hazards of chemical and drug waste?

Chemical waste and drug waste are toxic, genotoxic, corrosive, flammable, and explosive with hazards including:

(1) Absorption of chemicals or drugs through skin or mucous membranes can lead to poisoning; exposure to flammable, corrosive or active chemicals (formaldehyde or other volatile substances) through breathing, swallowing, skin and eyes can cause mucosal damages, among which burn is common.

(2) Chemical disinfectants are widely used in medical institutions and have certain corrosivity; active chemicals such as ethylene oxide may form highly toxic secondary compounds.

(3) Chemical residues discharged into the sewage treatment system of medical institutions may have adverse effects on the operation of sewage biological treatment devices or on the natural ecosystem of water.

(4) Waste containing antibacterial drugs, other drugs, heavy metals (such as mercury, phenol and its derivatives) and disinfectants can also cause similar problems.



45

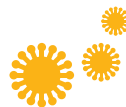
What are the hazards of genotoxic waste?

The hazards of genotoxic waste depend on the characteristics of toxicity as well as degree and time of exposure. In medical activities, contact is mainly made during the preparation and use of such drugs.

Main exposure pathways: inhalation of powder or aerosol, skin absorption, intake of food contaminated by cytotoxic waste, contact with body fluid and tissue fluid of patients undergoing chemotherapy.

The hazards of genotoxic waste include:

- (1) Some anti-tumor drugs are carcinogenic and mutagenic.
- (2) Some cytotoxic drugs have strong irritation and can cause local injury after direct contact with skin and eyes and may also lead to vertigo, nausea, headache or dermatitis.
- (3) If discharged into the environment, genotoxic waste will bring disastrous ecological consequences.



46

What hazards does mercury do to human body?

Mercury is neurotoxic and can cause kidney damage to human body. Inhaled mercury vapor or compounds can be absorbed through respiratory tract and accumulated in brain, endangering human nervous system. It can also lead to acute poisoning, interstitial pneumonia, bronchitis, local allergy, gingivitis, and muscle tremor.



47

What are the commonly used methods to treat mercury spill at present?

At present, there are six commonly used mercury spill treatment methods:

(1) When a small amount of mercury spills (e.g. mercury thermometer) onto the ground, the staff shall wear medical surgical or protective masks and medical latex gloves, take appropriate amount of sulfur powder to cover the spilled mercury to form mercury sulfide solid, collect the mercury sulfide solid into a bottle with a dustpan-shaped hard paper sheet and then tighten the bottle cap to reduce the emission of mercury vapor. Clean the harmful waste (including broken glass) and put it in a sealed container for proper treatment. After the treatment, withdraw the personnel, open the window for ventilation, and maintain air circulation.

(2) If mercury drops fall on the bedding or clothes, they shall be located as soon as possible and treated with the above method. The contaminated clothes and bedding shall also be hung in the sunlight for several hours.

(3) When a large amount of mercury spills (such as mercury sphygmomanometer), cover the spill with the lid of a sealed container to reduce the emission of mercury vapor, isolate the area, and notify relevant departments designated by medical institutions to clean it up.

(4) The parts of human body touching mercury shall be immediately cleaned and rinsed with cold water; if eyes are exposed to mercury, rinse them with plenty of cold water. In case of accidental taking, contact the nearest poison control center immediately for standardized treatment.



(5) Disposal of waste: liquid mercury and articles contaminated by it shall be collected separately from other waste and packed in a double-layer packaging bag or a sealed container specifically for medical waste. The special packaging bag for medical waste shall be sealed layer by layer in gooseneck type or a layer of packaging bag specifically for medical waste shall be sealed outside the sealed container in gooseneck type to ensure the sealing of the packaging bag or container is tight and marked with “有害废物，含重金属（汞）” [“Hazardous waste containing heavy metals (mercury)” in English]. It is forbidden to discard mercury-containing waste into household garbage or discharge it into the sewage treatment system of medical institutions.

(6) When batches of mercury-containing thermometers, mercury sphygmomanometers and other medical devices are scrapped, they shall be disposed by specialized agencies with hazardous waste disposal qualifications.

Attention: when mercury spill occurs, the operator shall evacuate the personnel first, and then open the window for ventilation, turn off the air conditioner, and place hazard warning signs to isolate the area before handling the mercury spill.



48

What are the treatment methods for chemical waste spill such as acid and alkali?

(1) In case of skin contact, rinse the skin with plenty of clear water for 15 minutes.

(2) In case of splashing into eyes, immediately rinse conjunctival sac with plenty of clear water for 15–20 minutes, blink frequently, and seek medical treatment immediately; do not rub eyes with hands.

(3) In case of small-area spill onto the ground or the surface of an object, do not clean it directly. Cover the spill with corresponding particles or powdery neutralizer and clean it with a tissue or wet sponge after the reaction stops.

(4) In case of large-area spill, the combustion source shall be shut, the area shall be evacuated, and the door leading to the area shall be closed.



49

What are the symptoms of and treatment methods for cytotoxic drug spill?

Most cytotoxic drugs are non-biodegradable. There may be irritation or allergic reaction for eyes or skin to have contact with cytotoxic drugs. Cytotoxic drugs may have adverse reactions to bone marrow, digestive tract, gonad and immune system. Some cytotoxic drugs can vaporize and be absorbed through skin or respiratory tract. Therefore, spilled cytotoxic drugs shall be handled carefully.

Symptoms of cytotoxic drug spill and treatment methods include:

(1) All people shall be evacuated immediately and the spill area shall be isolated. First aid and medical aid shall be provided to the contacts and sufficient protective supplies shall be provided to the personnel cleaning the site to control the spill speed of waste.

(2) Collect all spillages and contaminated materials (sharps cannot be directly picked up by hand), separate them from other waste, discard them in tightly sealed and marked packaging bags or containers that meet certain performance requirements on seepage prevention and tear strength, and treat them as special waste.

(3) When cleaning the spillage, wear waterproof coat, waterproof gloves, breathing mask and goggles. Absorb spilled liquid with hygroscopic material, immediately rinse the operator's contacted body part with a large amount of cold water, and provide medical aid when necessary.



50

What are the main technical methods for centralized disposal of medical waste currently used in China? What are their technical principles respectively?

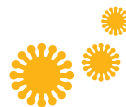
The main technical methods for centralized disposal of medical waste currently used in China include: high-temperature incineration, chemical treatment, high-pressure steam treatment, microwave treatment, and high-temperature and high-pressure crushing and destruction treatment.

(1) High-temperature incineration: medical waste is burned in a high-temperature furnace at about 1,000℃, which can sterilize and remove most pollutants relatively thoroughly and reduce the volume greatly. This technology has many advantages, such as wide application range for medical waste, difficult identification of medical waste after treatment, thorough disinfection and sterilization, remarkable effect of volume reduction, meeting relevant standards and specifications, and technology maturity.

The high-temperature incineration technology is not applicable to the treatment of radioactive waste, high-pressure containers, waste cytotoxic drugs, highly toxic substances, inflammable and explosive articles, and medical waste with high content of heavy metals (such as lead, cadmium, and mercury).

(2) Chemical treatment: medical waste crushed by special machines is well mixed with chemical disinfectants such as sodium hypochlorite and stays for a sufficient period of time, during which organic substances are decomposed and infectious pathogens are killed or inactivated.

Chemical treatment technology is not applicable to the treatment of chemical waste, radioactive waste, and volatile and semi-volatile organic



compounds.

(3) High-pressure steam treatment: during this process, medical waste is placed in a metal pressure vessel (an autoclave with sufficient compressive strength) and superheated steam is used to kill pathogenic microorganisms in it via a certain way.

High-pressure steam treatment technology cannot be used to treat mercury and chemical, drug and pathologic waste.

(4) Microwave treatment: according to the principle that most microorganisms can be killed under microwaves with a certain frequency and wavelength, the previously crushed and wet waste is excited by microwaves to generate heat and release steam so as to achieve the purpose of disinfection and sterilization. Microwave and appropriate amount of water are the two basic conditions to generate heat for disinfection and sterilization.

Microwave treatment technology is not applicable to the treatment of radioactive waste, drug waste, chemical waste and pathologic waste (human organs, infectious animal carcasses, etc.).

(5) High-temperature and high-pressure crushing and destruction treatment: medical waste is sent into a special pressure vessel and then disinfected by vacuum, high temperature, and high-pressure steam under the control of a computer.

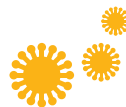


51

What are the sources of moisture in solid medical waste? Why shall water content in solid medical waste be reduced?

(1) Part of moisture in solid medical waste is generated during the use of medical supplies, partly brought unconsciously during operations, and partly put in artificially due to the lack of BAT/BEP concept for the management of medical waste by staff of medical institutions or operation staff of medical waste centralized disposal centers.

(2) Moisture can be brought in via two pathways-unintentionally and artificially. The comprehensive calorific value of medical waste in China, due to its high water content, is mostly lower than 2,500 kJ/kg, requiring the addition of fuel oil or coal to support combustion, which actually increases the amount of medical waste to be treated indirectly, the emission of POPs such as PCDD and PCDF, and also the treatment cost. Therefore, effective measures shall be taken to reduce the unintentional and artificial introduction of water content in solid medical waste.



52

Who is the first person responsible for the management of medical waste in medical institutions and departments (divisions)? What are the requirements for the organizational system for the management of medical waste?

Medical institutions shall establish and improve the responsibility system for the management of medical waste. The legal representative of the medical institution is the first person responsible for the management of medical waste in the unit; the department director is the first person responsible for the management of medical waste in the department; and the specific departments and operation personnel that generate medical waste are the direct persons responsible for the management of medical waste. The persons responsible shall earnestly perform their duties to prevent the spread of infectious diseases and environmental pollution accidents caused by medical waste.

Medical institutions shall establish and improve the organizational system for the management of medical waste. A leading group for the management of medical waste shall be set up, with the legal representative of the medical institutions as group leader and the main persons responsible as deputy group leaders, to form a three-level management organization system joined by persons responsible for logistics management department, infection control department, medical department (division), and nursing department, as well as persons in charge of clinical and medical technique departments, operating under clear division of labor and responsibilities.



53

What are the main responsibilities of the leading group for the management of medical waste in medical institutions?

The leading group for the management of medical waste in medical institutions is responsible for the leadership, coordination and management of the overall treatment of medical waste in the hospital, the formulation of management system of medical waste and emergency plan for the hospital, the holding of regular meetings to study, coordinate and solve problems related to the management of medical waste in the unit, and the decision-making of important events and emergencies regarding the management of medical waste.



54

What are the main responsibilities of logistics management department of medical institutions in the management of medical waste?

The logistics management departments of medical institutions, as the leading department for the management of medical waste, shall be responsible for the formulation and implementation of various working systems for the management of medical waste, the guiding and inspecting of the implementation of various tasks as well as the occupational safety protection in the classified collection, transport, temporary storage and disposal of medical waste in the unit, the organization of emergency treatment of the loss, leakage, diffusion and accidents of medical waste, the registration of medical waste and the management of their archives, and the timely analysis and treatment of the other problems in the management of medical waste.

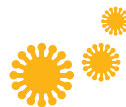


55

What are the main responsibilities of the infection control department, medical department (division), nursing department and outpatient department (office) of medical institutions in the management of medical waste?

The infection control department of medical institutions is responsible for training the staff of the whole hospital in theoretical knowledge and professional skills on the management of medical waste, as well as supervising, managing and providing technical guidance to the management of medical waste in medical institutions.

Medical department (division), nursing department, outpatient department (office) and other departments of medical institutions are responsible for guiding and supervising the classified discarding, collection, packaging and recording of medical waste generated by each department (division).



56

What are the main responsibilities of medical institutions' departments (divisions) that generate medical waste in the management of medical waste?

Departments (divisions) of medical institutions that generate medical waste shall strictly follow relevant requirements on the management of medical waste, standardize the allocation of packaging bags and containers for medical waste, discard medical waste in yellow medical waste containers with a foot-pedal and a cover and lined with packaging bags specifically for medical waste according to classification requirements, discard used sharp medical instruments in sharps boxes, and carry out the transfer and registration, as well as data preservation.



57

What are the systems and requirements that shall be formulated and implemented for the management of medical waste in medical institutions?

(1) Rules and regulations, work flow and relevant work responsibilities for the management of medical waste, as well as emergency plans for the loss, leakage, diffusion and accidents of medical waste in medical institutions.

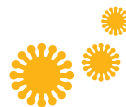
(2) Methods and work requirements for the classified collection of medical waste in the departments (divisions) that generate medical waste.

(3) Working systems of departments (divisions) that generate medical waste and temporary storage places for medical waste, as well as relevant work requirements on the transport from departments (divisions) that generate medical waste to temporary storage places for medical waste.

(4) Regulations on the transfer and registration of medical waste regarding its transport within the unit and the delivery of it to local disposal center for medical waste.

(5) Emergency treatment measures for the loss, leakage, diffusion and accidents of medical waste during the management of medical waste.

(6) Occupational safety protection for related staff during the classified collection, transport, temporary storage and transfer of medical waste.



58

What are the main aspects of the management system of medical waste and the job responsibilities for the management of medical waste in medical institutions?

(1) Management system of medical waste in medical institutions mainly includes: management system of medical waste, working system for the management of medical waste, disinfection and isolation system for temporary storage places of medical waste, and occupational safety protection system.

(2) Job responsibilities for the management of medical waste mainly include: job responsibilities of full-time or part-time management staff, collection staff, transport staff and the staff at the temporary storage place.

(3) Drawings and procedures for the management of medical waste include: classification diagrams of medical waste, management procedures of medical waste (collection, transport, temporary storage, and transfer), and disposal procedures for occupational exposure.



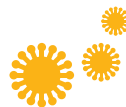
59

How do medical institutions carry out training on all levels and types of staff in relevant knowledge and skills regarding the management of medical waste?

(1) Formulate annual plan for the training of all levels and types of staff in relevant knowledge and skills such as the management of medical waste and occupational safety protection.

(2) Competent leaders, competent departments and full-time or part-time staff responsible for the management of medical waste shall receive training in knowledge and skills related to the management of medical waste organized by health departments of provinces, cities and counties (county-level cities).

(3) Training shall be carried out in stages and batches according to different specialties. Training plan and relevant information on its implementation (lecture notes, signatures of trainees, examinations or assessments, and summaries) shall be complete and detailed.



60

What is the main content of training in the management of medical waste on all levels and types of staff in medical institutions?

(1) All staff shall receive training in relevant laws, regulations, rules, specifications and professional skills for the management of medical waste, as well as occupational safety protection and occupational exposure disposal procedures, emergency treatment and emergency plans.

(2) Medical staff are mainly trained in discarding medical waste by category, correct use and standardized sealing of packaging bags and containers for medical waste, and timely transfer and registration of medical waste.

(3) Cleaning staff are mainly trained in classified collection and standardized sealing of medical waste, as well as handling of scattered (sprinkled) medical waste.

(4) Staff for the collection and management of medical waste are mainly trained in the collection, transport, temporary storage and transfer of medical waste, as well as collection time, route, cleaning and disinfection requirements on transfer tools, and management and transfer procedures at temporary storage places.



61

What knowledge and skills shall be mastered by relevant personnel and management staff of medical institutions engaged in the classified collection, transport, temporary storage and transfer of medical waste after they get trained?

(1) They shall master the provisions of relevant laws, regulations, rules and normative documents on the management of medical waste and be familiar with the rules and regulations, work flow and various work requirements on the management of medical waste of the unit.

(2) They shall get the hang of the correct methods and operating procedures for classified collection, transport and temporary storage of medical waste.

(3) They shall grasp the knowledge of safety practice, professional skills, occupational health and safety protection in medical waste classification.

(4) They shall know well the methods for preventing occupational exposure in the process of classified collection, transport, temporary storage and transfer of medical waste, as well as the emergency treatment measures after exposure.

(5) They shall master the emergency treatment measures in case of loss, leakage, diffusion and accident of medical waste.



62

What is the significance of standardizing and strengthening the management of medical waste in medical institutions?

Medical waste is a kind of hazardous waste and is extremely harmful to human beings and social environment. Standardizing and strengthening the safety management of medical waste is of great significance to prevent the spread of diseases and protect the environment, human health, the staff of medical institutions, medical waste disposal staff and the public; it can also reduce POPs generated from the disposal of medical waste and thus protecting public health.



63

How shall medical institutions strengthen quality supervision of medical waste?

Medical institutions shall strengthen quality supervision on every process of the management of medical waste. It includes the process from the source of classified waste discarded by the departments (divisions) that generate medical waste to local centralized disposal units for medical waste where medical waste is safely transferred, from the core concepts of promoting hazard-free treatment, reduction and recycling of medical waste to implementing standardized management of medical waste generated by medical institutions in the whole hospital, among the whole staff and through the whole process, and from reducing the harm to medical institutions, social environment and human health caused by non-standard management and disposal process of medical waste to strengthening the safety management of medical waste generated by medical institutions to ensure medical quality and doctor-patient safety and protect social environment.



64

What document shall medical institutions abide by to purchase and use special packaging bags and containers for medical waste? When was the document implemented?

The purchase and use of special packaging bags and containers for medical waste by medical institutions shall be in accordance with the requirements of Standard of Packaging Bags, Containers and Warning Symbols Specific to Medical Waste (HJ 421—2008) issued by the former State Environmental Protection Administration and the former Ministry of Health. The implementation date of this Standard is April 1, 2008.

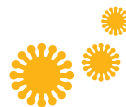


65

What are special packaging bags for medical waste? What are the technical requirements for them?

(1) Special packaging bags for medical waste refer to soft bags (cylindrical and flat-mouth) used for primary packaging of medical waste (excluding injury waste) and meeting certain requirements for anti-seepage and tear strength.

(2) Technical requirements for special packaging bags for medical waste: the volume shall be moderate and match with medical waste container (bin) or recycle box, which is convenient for operation; the material, shape, toughness and other physical and mechanical properties shall meet relevant requirements; the bag shall be of light yellow with a medical waste warning mark composed of a right-angled diamond with four rings and “警告! 感染性废物” in Chinese and “Warning! Infectious medical waste” in English printed on an obvious part. Under normal use conditions, leakage, rupture or perforation shall not occur; PVC materials shall not be used when medical waste is disposed by high-temperature thermal treatment technology.



66

What are special containers (bins) for medical waste? What are the technical requirements for them?

(1) Special containers (bins) for medical waste refer to special containers for temporary storage of medical waste used by departments (divisions) that generate medical waste in medical institutions.

(2) Technical requirements for containers (bins): containers (bins) shall be of light yellow, impermeable, easy to clean and disinfect, and the side of the container or the obvious part of the bin body shall be printed (sprayed) into a right-angled diamond with four rings and “警告! 感染性废物” in Chinese and “Warning! Infectious medical waste” in English.

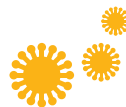


67

What are recycle boxes for medical waste? What are the technical requirements for them?

(1) Recycle boxes (bins) for medical waste refer to special rigid containers used to contain primarily packaged medical waste during temporary storage or transport of medical waste.

(2) Technical requirements for recycle boxes (bins): recycle boxes (bins) shall be of light yellow, and the side of the box or the obvious part of the bin body shall be printed (sprayed) into a right-angled diamond with four rings and “警告! 感染性废物” in Chinese and “Warning! Infectious medical waste” in English; as a whole, it shall prevent liquid leakage and shall be easy to clean and disinfect; it shall be airtight with the box body and the cover can be firmly fastened without separation after being fastened; its surface shall be smooth and flat, complete without crack damage or obvious concave part, and the edges and handles shall be free of burrs; the bottom and top of the box shall be provided with grooves with anti-skid function.



68

What are sharps boxes for medical waste? What are the technical requirements for them?

(1) Sharps boxes for medical waste refer to disposable special rigid containers used for containing injury waste.

(2) Technical requirements for sharps boxes: the overall color of sharps boxes shall be light yellow, and the obvious part of its side shall be printed into a right-angled diamond with four rings and “警告! 损伤性废物” in Chinese and “Warning! Injury waste” in English; as a whole, it is made of rigid material and is closed and puncture-proof, so as to ensure that the content in it does not leak under normal conditions, and once the sharps box is sealed, it cannot be opened again without damage. PVC materials shall not be used when high-temperature thermal treatment technology is used to dispose of injury waste; well filled sharps boxes shall withstand free-drop to the concrete floor from a height of 1.2 m for 3 consecutive times without cracking or puncturing; the specifications and dimensions of sharps boxes shall depend on the amount of injury waste generated by related departments (divisions).



69

What are the requirements for warning marks and warnings on special packaging bags, containers and sharps boxes for medical waste?

Warning marks and warnings on special packaging bags, containers and sharps boxes for medical waste shall meet the following requirements:

(1) The warning mark is in the form of a right-angled diamond, and the warnings shall be used in combination with the warning mark, as shown in Figure 1.

(2) The color and specification of warning marks shall conform to relevant requirements of Standard of Packaging Bags, Containers and Warning Symbols Specific to Medical Waste (HJ 421—2008).

(3) The background color of the warning mark with warnings is the same as that of the packaging bag and container, the color of the border and warnings is black, the length-width ratio is 2 : 1, and the width is the same as the height of the warning mark.



Figure 1. Warning mark with warnings



70

What are the requirements for the management of medical waste in each department (division) of medical institutions?

(1) There shall be a medical waste classification diagram or text description at medical waste temporary storage point of each department (division).

(2) Before using special packaging bags, containers (bins) and sharps boxes for medical waste, careful inspection shall be carried out to ensure no damage, leakage or other defects.

(3) Medical waste shall be classified and discarded in yellow and covered containers (bins) with a foot-pedal for medical waste lined with special packaging bags for medical waste that meet the requirements of Standard of Packaging Bags, Containers and Warning Symbols Specific to Medical Waste; it is forbidden to mix medical waste into other waste or household garbage.

(4) Infectious waste, injury waste, pathologic waste, drug waste and chemical waste shall not be mixed before collection; a small amount of drug waste can be mixed into infectious waste, but it shall be indicated on the label.

(5) Abandoned medical needles, blades, glass slides, glass test tubes, glass ampoules and other sharp medical instruments shall be discarded in sharps boxes; once the sharps box is sealed, it cannot be opened again without damage, i.e., it shall be used and discarded at a time.

(6) The management of abandoned narcotic drugs, psychotropic drugs, radioactive drugs, toxic drugs and other related waste shall be carried out in accordance with relevant laws, regulations, national regulations and standards, and the requirements for the use, handover and registration shall be strictly

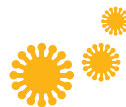


implemented.

(7) Batches of waste chemical reagents and disinfectants in chemical waste shall be disposed by specialized agencies.

(8) When batches of mercury-containing thermometers, sphygmomanometers and other medical devices are scrapped, they shall be disposed by specialized agencies with hazardous waste disposal qualifications.

(9) Infectious waste, pathologic waste and injury waste put into special packaging bags or containers for medical waste shall not be taken out.



71

What are the requirements for the treatment of high-risk waste such as pathogen culture medium and specimens, preservation solution of strains and virus seed in medical waste generated by medical institutions?

High-risk waste such as pathogen culture medium and specimens, preservation solution of strains and virus seed shall first go through pressure steam sterilization or chemical disinfection treatment by departments (divisions) such as clinical laboratories and pathogenic microorganism laboratories at the place of production before being collected and treated as infectious waste.



72

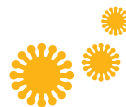
How do medical institutions regulate the management of pathologic waste liquid?

(1) Pathologic waste liquid shall be collected in a closed container by specially-assigned persons and regularly handed over to medical waste collection personnel of the unit according to the generated amount, and a Medical Waste Collection Registration Form shall be filled in duplicate and signed by both parties; no spillage or leakage shall be allowed during transport in the hospital.

(2) Pathologic waste liquid shall be stored separately and shall not be mixed with other medical waste.

(3) Medical institutions shall hand over the pathologic waste liquid to the unit that has obtained hazardous waste disposal qualification and signed an agreement with the medical institution for centralized recovery, fill in the Duplicate Tables for the Transfer of Hazardous Waste and file it for record.

(4) Medical institutions and individuals shall not dump pathologic waste liquid into the sewage treatment system of medical institutions or dispose of it by themselves.



73

What shall medical institutions do when collecting medical waste?

(1) Medical waste generated by the medical institutions shall be collected in a timely manner and discarded by category in special packaging bags or closed containers that prevent leakage and penetration of sharp objects respectively.

(2) There shall be obvious warning marks and warnings on the packaging bags and containers specifically for medical waste.

(3) Warning marks and warnings on special packaging bags and containers for medical waste shall conform to relevant requirements of Standard of Packaging Bags, Containers and Warning Symbols Specific to Medical Waste (HJ 421—2008).



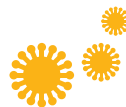
74

What are the matters needing attention when collecting medical waste?

(1) When the volume of medical waste reaches $\frac{3}{4}$ of the full size of the packaging bag or container, an effective sealing method (gooseneck type sealing of the special packaging bag for medical waste) shall be used to make the sealing of the packaging bag or container tight.

(2) When the outer surface of the packaging bag or container is contaminated by infectious waste, the contaminated part shall be disinfected or an extra layer of packaging shall be used.

(3) Warning marks shall be on the outer surface of each packaging bag and container containing medical waste; each packaging bag and container shall be attached with a Chinese label indicating departments (divisions) generating medical waste, date of generation, category and special instructions required, etc.



75

What are the requirements for the management of storage place of departments (divisions) generating medical waste?

There shall be a schematic diagram or written description of the classification and disposal of medical waste at the storage place (soiled articles disposal room, etc.) of the departments (divisions) generating medical waste; according to the classification requirements for infectious waste, injury waste, pathologic waste, chemical waste and drug waste, it shall be discarded into corresponding packaging bags or containers.



76

How to collect, transport and temporarily store medical waste in medical institutions? How shall medical waste be handed over to the staff of centralized disposal units for medical waste?

Medical institutions shall assign special personnel to collect medical waste. First, the special personnel go to the departments (divisions) generating medical waste at appointed time, place the medical waste that has been effectively sealed and with an intact Chinese label in a closed transfer tool, and complete the handover procedures with signatures of both the special personnel and the staff of the departments (divisions); then, the collected medical waste is transported to the room of the temporary storage place for medical waste via a special route (elevator) and temporarily stored by category; the medical waste collection (temporary storage) personnel of medical institutions and the personnel of the local centralized disposal units for medical waste complete the handover procedures with signature of both parties. Chemical waste shall be put into a closed container, placed separately, and handed over to the disposal units for hazardous waste that have obtained hazardous waste disposal qualification issued by the provincial administrative department of ecology and environment and signed an agreement with the medical institution, with signatures of both sides.



77

What else shall infectious outpatient services (fever clinic, enteric diseases clinic, etc.) and wards do while strictly implementing their own management system of medical waste?

(1) Household garbage generated by infectious patients or suspected infectious patients shall be discarded into special packaging bags for medical waste.

(2) Medical waste generated by infectious patients or suspected infectious patients shall be discarded into medical waste containers lined with a double-layer packaging bag specifically for medical waste.

(3) Infectious excreta produced by infectious patients or suspected infectious patients shall be strictly disinfected in accordance with the provisions of the state, and shall not be discharged into the sewage treatment system until it reaches national discharge standards.



78

How do staff of medical institutions prevent occupational exposure when disposing of sharp medical instruments?

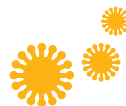
Wounding and cutting by medical needles and suture needles contaminated by blood/body fluid and sharp medical instruments such as scalpels, bistoury, skin preparation knives, surgical saws, glass slides, glass test tubes, and glass ampoules are the main routes of blood/body fluid transmission of hepatitis B, hepatitis C and HIV infection after occupational exposure. Therefore, special care shall be taken to avoid injury during diagnosis and treatment operations, disposal of sharp medical instruments and collection of medical waste. Preventive measures include:

(1) When holding a syringe with a needle or moving a sharp medical instruments, do not point the needle and sharp medical instruments towards yourself or others.

(2) Do not cap the used needle bare-handed; when it is necessary to do so, cap it with one hand or use an auxiliary device.

(3) It is forbidden to bend or destroy the needle and dispose of broken glass with bare hands.

(4) The used sharp medical instruments shall be disposed in sharps boxes in time; reusable needles (e.g. needles for waist piercing, chest piercing, etc.) shall be placed in puncture resistant containers and centralized recovery treatment shall be carried out by the hospital disinfection supply center (department).



79

What shall medical waste transport personnel in medical institutions pay attention to in medical waste transport?

(1) Medical waste shall be collected and transported by special personnel in a timely manner. Collection and transport personnel shall be properly dressed and protected. They shall wear special work clothes, special work shoes, working round cap, medical surgical mask and rubber gloves.

(2) Special closed transfer tools, recycle boxes, or recycle bins that meet the requirements (anti-leakage, anti-spilling, no sharp corners, easy for loading and unloading as well as for cleaning and disinfection, with standard identification) shall be used to transport medical waste.

(3) The classified and packaged medical waste shall be transported from the departments (divisions) generating medical waste to the room of the designated temporary storage place for medical waste at specified time by specific route.

(4) Before transporting medical waste, warning marks, labels and seals of the packaging bags or containers shall be checked to see if they meet the requirements. Medical waste that fails to meet the requirements shall not be transported to the temporary storage place for medical waste.

(5) When transporting medical waste, it is necessary to prevent damage to packaging bags or containers, as well as loss, leakage and diffusion of medical waste, and prevent medical waste from directly contacting the body.

(6) After delivery of each day, the delivery tools (closed transfer tools, recycle boxes or recycle bins) shall be cleaned and disinfected in a timely manner. When cleaning and disinfecting transport tools, protective articles such as waterproof apron, goggles and rubber boots shall be worn.



80

What are the requirements for medical institutions to establish a temporary storage place for medical waste?

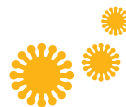
(1) The temporary storage place for medical waste shall be far away from the medical area, food processing area, personnel activity area and household garbage storage place and shall facilitate the access of medical waste transport personnel, transport tools and vehicles.

(2) Full-time or part-time staff shall be assigned for management to prevent non-staff from contacting medical waste.

(3) Staff locker rooms, registration rooms, storage rooms for clean transfer vehicles and temporary storage rooms for medical waste shall be provided; tools and drainage pipes convenient for vehicle washing and disinfection shall be equipped; and sewage shall be discharged into sewage treatment system of medical institutions.

(4) Obvious warning marks indicating medical waste and signs writing “禁止吸烟、饮食”(“No Smoking or Eating” in English) shall be set up.

(5) Hand hygiene facilities set in the staff locker room and registration room shall be effective, complete and convenient to use (hand washing sink with running-water, non-touch faucet switch, hand drying facilities and hand disinfectant); education and illustration on related requirements for hand hygiene (WHO: five moments for hand hygiene, and hand hygiene process diagram) shall be provided.



81

What requirements shall be met for the temporary storage room for medical waste and its facilities and equipment in the medical waste temporary storage place of medical institutions?

- (1) The floor and wall surface of the temporary storage room for medical waste shall be smooth and easy to wash, clean and disinfect.
- (2) Sealing shall be tight to prevent rats, mosquitoes, flies, cockroaches, leakage, theft and rain erosion, and protect children from exposure.
- (3) Avoid direct sunlight.
- (4) The size of the temporary storage room for medical waste shall meet the storage need for medical waste and recycle boxes (bins) in the unit; sufficient recycle boxes (bins) shall be provided.
- (5) For temporary storage of pathologic waste, low-temperature storage or anti-corrosion conditions shall be provided.
- (6) The temporary storage room shall temporarily store medical waste according to the categories and labels of medical waste.



82

What are the requirements for the temporary storage sites and time of medical waste in medical institutions?

- (1) It is forbidden to store medical waste in the open air in medical institutions.
- (2) The temporary storage time of medical waste shall not exceed 2 days.
- (3) After medical waste is transferred out, temporary storage sites and facilities shall be cleaned and disinfected in time.



83

What content shall medical institutions register for medical waste?

Medical institutions shall register the information of medical waste, including but not limited to the source, category, weight or quantity, handover time, final destination, and signature of the handler, in duplicate and signed by both parties. Registration documents shall be kept for at least 3 years.



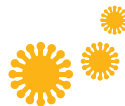
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What occupational safety protection shall medical institutions provide to the staff and management personnel engaged in medical waste collection, transport, temporary storage and transfer?

(1) Effective occupational safety protection measures shall be taken and regular health checks shall be carried out.

(2) Necessary protective equipment shall be provided, such as face shield or goggles, disposable working round cap, medical surgical mask, special work clothes, waterproof apron, rubber boots, rubber gloves and disposable medical latex gloves.

(3) When necessary, relevant personnel shall be immunized to prevent them from health damage.



85

What are the main supplies that shall be provided in the occupational exposure treatment box for medical personnel?

The occupational exposure treatment box for medical personnel shall be put at a place convenient for access, and well equipped with the following main supplies:

1 bottle of 0.9% sodium chloride injection (100~250 mL/plastic bottle), 2 disposable sterile injection needles above the size of No.12, 1 water receiver (or kidney basin), 1 bag of sterile cotton swabs, 1 bag of sterile medical gauze (2 pieces), 1 bag of medical infusion adhesive, and 1 bottle of skin disinfectant (30~60 mL/bottle).

It is suggested to put the laminated Flow Chart of Occupational Exposure Treatment Procedure for Medical Staff and Allocation Form of Supplies in Occupational Exposure Treatment Box for Medical Staff in the box. Medical staff shall be familiar with and master the occupational exposure handling process and occupational exposure reporting process.



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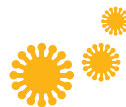
What are the common occupational exposures and preventive measures in the treatment of medical waste generated by medical institutions?

(1) Mechanical injury: acupuncture and other sharp injuries. Sharps shall be handled carefully and disposed in sharps boxes, and then seal the sharps boxes.

(2) Physical injury: radiation injury and burn. Radioactive waste shall be disposed in special packaging bags with obvious signs, and throughout the disposal process, it shall be radiation-proof and sealed.

(3) Chemical injury: chemical injury is caused by cytotoxic drugs and chemical disinfectants. There shall be obvious signs, and throughout the disposal process, skin and mucous membrane injury shall be prevented.

(4) Biological injury: infectious patients, and skin soft tissue infections. Standard preventive measures shall be implemented throughout the disposal process of medical waste.



87

What are the “Three Precautions” that medical waste transport personnel in medical institutions shall perform during transport?

Medical waste transport personnel in medical institutions shall use special transport tools that are leak-proof, spill-proof, free of sharp edges and corners, easy to load and unload, clean and disinfect, and they shall avoid direct contact with medical waste, protect packaging bags or containers from being damaged, and prevent the loss, leakage and diffusion of medical waste.



88

What is the “Six Precautions, One Convenience and One Avoidance” that shall be implemented in the room of the medical waste temporary storage place of medical institutions?

Six precautions: prevent non-working personnel or children from exposing to medical waste; repel rats, mosquitoes and flies, and cockroaches; avoid leakage and rain wash; and guard against theft.

One convenience: be convenient to clean and disinfect.

One avoidance: avoid direct sunlight.



89

What are the “Five Prohibitions” that medical institutions shall do in the collection, temporary storage and management of medical waste?

- (1) It is prohibited to dump or pile up medical waste in non-collection or non-temporary storage places.
- (2) It is prohibited to mix medical waste with other waste and household garbage.
- (3) It is prohibited to store medical waste in the open air.
- (4) It is prohibited for medical institutions and their staff to transfer, discard, or trade medical waste.
- (5) It is prohibited to smoke, eat or drink at the temporary storage places for medical waste.



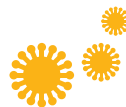
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What are the main supplies that shall be provided in the blood/body fluid spillage treatment box of departments (divisions) in medical institutions?

The blood/body fluid spillage treatment box of departments (divisions) in medical institutions shall be suitable in size, well equipped and put at a place convenient for access.

The supplies include: 1 medical surgical mask, 1 small watering can of 250 mL, 1 bottle of chlorine-containing effervescent disinfectant tablets in small quantity, 1 pack of absorbent tissue (about 20 sheets), 2–3 cotton towels (cotton wipes), 1 long brush, 2 pairs of medical latex gloves, 1 pair of holding forceps or clamps, and 2 special packaging bags for medical waste.

It is suggested to put the laminated Allocation Chart of Blood/Body Fluid Spillage Treatment Box and Flow Chart of Blood/Body Fluid Spillage Treatment Procedure in the box. Staff shall be familiar with and master the blood/body fluid spillage treatment procedure.



91

What is the treatment procedure for small-area blood/body fluid spillage in medical institutions?

When a small area of blood/body fluid pollution occurs in a medical institution, staff members shall wear medical surgical masks and medical latex gloves. If there are sharps such as broken glass or syringes mixed in, use holding forceps or clamps to carefully pick up the mixed sharps and discard them into sharps boxes. Cover and adsorb pollutants with sufficient absorbent tissue, use a small watering can to prepare a disinfectant solution containing available chlorine of 2,000 mg/L on site, and spray the disinfectant solution on the absorbent tissue in an appropriate dosage forming no running water. After covering and disinfecting for 2 minutes, wrap the blood/body fluid with the covering, discard it into a double-layer packaging bag specifically for medical waste and seal it with an effective sealing method; then clean and disinfect the spillage area. Remove protective supplies according to the correct removal sequence, and wash and disinfect hands.



92

What is the treatment method for large-area blood/body fluid spillage in medical institutions?

When a large amount of blood/body fluid spillage occurs in a medical institution, the staff members shall wear working round caps, medical surgical masks, medical latex gloves (goggles or face shields if necessary), anti-seepage isolation gowns, and rubber boots for treatment. Use absorbent materials to cover and adsorb first, then spray disinfectant containing available chlorine of 2,000 mg/L onto the polluted area and use a small towel to wipe and disinfect the area from outside to inside taking the pollutants as the center; if there is a crack on the ground or a joint between floor tiles, scrub the crack or joint with a brush and then scrub it again with clear water. Wash away pollutants on the used holding forceps and brushes under running water, soak and disinfect them with disinfectant containing available chlorine of 2,000 mg/L for 30 minutes, and then clean and dry them for standby. Absorbent tissues and small towels shall be disposed in a special double-layer packaging bag for medical waste and sealed in layers using an effective sealing method, and treated as medical waste; then clean and disinfect the spillage area. Remove and take off protective supplies according to the correct sequence, and wash and disinfect hands.



93

What are the principles of emergency treatment when a large amount of medical waste spills in medical institutions?

The emergency treatment principles for a large amount of medical waste spillage in medical institutions include: isolation of areas contaminated by spillage (or initiation of emergency procedures), cleaning of spilled medical waste, cleaning and disinfection of contaminated areas, and reporting of incidents.



94

How shall medical institutions carry out emergency treatment when a large amount of medical waste spills?

(1) Medical institutions shall formulate emergency plans and emergency handling procedures for different types of emergencies.

(2) Immediately initiate emergency procedures and isolate areas contaminated by medical waste spillage.

(3) According to the nature of spilled medical waste, appropriate measures shall be taken to clean it up.

(4) Clean and disinfect contaminated areas and wear protective supplies during cleaning to prevent occupational exposure.

(5) Medical waste management personnel shall investigate the incident, find out the causes and formulate corrective measures to prevent the recurrence of similar incidents. Record the incident in detail, summarize and report it in time to the competent department and hospital leaders in written form.



95

How to deal with leakage, diffusion and accidents of medical waste in medical institutions?

(1) When the outer surface of the packaging bag or container for medical waste is contaminated by infectious waste or the packaging is damaged, an extra layer of packaging bag shall be used.

(2) Warning marks shall be placed when medical waste leaks onto the ground; when the ground is obviously contaminated by patient's blood/body fluid, the disinfection method above the medium level shall be selected according to the specific situation. For a small amount (< 10 mL) of spillage, disinfection can be performed after it is cleaned; for a large amount (> 10 mL) of blood/body fluid spillage, the visible contamination shall be removed with hygroscopic material before cleaning and disinfection.



96

What emergency treatment measures shall be taken in time in case of loss, leakage, diffusion and accidents of medical waste in medical institutions?

(1) Find out the category, quantity, occurrence time, impact scope and severity of medical waste that has lost, leaked or diffused.

(2) Send relevant personnel to deal with the site where medical waste has lost, leaked or diffused as soon as possible according to the emergency plan for medical waste treatment.

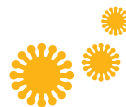
(3) Staff shall dress in accordance with the requirements for occupational safety protection before disposing of leaked and diffused medical waste and contaminated areas.

(4) When treating areas polluted by medical waste, the impact on patients, staff, other on-site personnel and the environment shall be minimized.

(5) Take appropriate safety disposal measures to disinfect or otherwise conduct sound treatment of leaked medical waste and contaminated areas and supplies, and block the contaminated areas when necessary to prevent the pollution from expanding.

(6) When disinfecting areas contaminated by infectious waste, disinfection shall be carried out from the least contaminated area to the most contaminated area, and all used tools that may be contaminated shall also be disinfected.

(7) After treatment, medical institutions shall investigate the cause of the incident and take effective preventive measures to prevent the occurrence of similar incidents.



97

How shall the loss, leakage, diffusion and accidents of medical waste in medical institutions be reported?

In case of loss, leakage, diffusion and accidents of medical waste in medical institutions, the responsible person shall take corresponding emergency treatment measures in accordance with Regulations on the Management of Medical Waste and Measures for the Management of Medical Waste in Medical and Health Institutions, and report to the logistics management department in a timely manner. Medical institutions shall report to the health department and the ecological environment protection department of people's government at the county level within 48 hours. After the investigation and treatment is completed, medical institutions shall report the investigation and treatment results to the health department and the ecological environment protection department of local people's government at the county level.



98

What emergency measures shall be taken in medical institutions to deal with personal health injuries caused by improper treatment of medical waste?

(1) In the event of a major accident in a medical institution that results in the death of more than 1 person or the health damage of more than 3 persons due to improper management of medical waste and requires medical rescue and on-site rescue of the pathogenic personnel, the medical institution shall report to the health department of local people's government at the county level within 12 hours and take corresponding emergency treatment measures in accordance with Regulations on the Management of Medical Waste and Measures for the Management of Medical Waste in Medical and Health Institutions.

(2) In the event of a major accident in a medical institution that results in the death of more than 3 persons or the health damage of more than 10 persons due to improper management of medical waste and requires medical rescue and on-site rescue of the pathogenic personnel, the medical institution shall report to the health department of local people's government at the county level within 2 hours and take corresponding emergency treatment measures in accordance with Regulations on the Management of Medical Waste and Measures for the Management of Medical Waste in Medical and Health Institutions.

(3) When there is an infectious disease transmission accident in a medical institution caused by improper management of medical waste, or there is evidence to prove that an infectious disease transmission accident is likely to occur, the medical institution shall report in accordance with Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases and relevant regulations, and take corresponding measures.



99

Under which circumstances and what documents has a medical institution violated in the management of medical waste, will the health department of local people's government at or above the county level order it to make corrections within a time limit, give it a warning and impose a fine?

The health department of local people's government at or above the county level will order a medical institution to make corrections within a time limit, give it a warning and may impose a fine of from 2,000 *yuan* to 5,000 *yuan* if a medical institution fits any of the following circumstances stipulated in Regulations on the Management of Medical Waste and Measures for the Management of Medical Waste in Medical and Health Institutions in management of medical waste:

(1) The medical institution fails to establish and promote the medical waste management system, or fail to set up a monitoring department or assign full time or part-time personnel.

(2) The medical institution fails to train personnel in relevant laws, professional techniques, safety protection, emergency treatment and other related aspects.

(3) The medical institution fails to register medical waste or fail to save registration documents.

(4) The medical institution fails to take occupational health protection measures for the personnel and management personnel engaged in the classified collection, transport, temporary storage and disposal of medical waste in the institution.

(5) The medical institution fails to clean and disinfect the used medical waste transport tools in time.

(6) For medical institutions that have built their own medical waste disposal facilities, they fail to regularly test and evaluate the hygienic effects of medical waste disposal facilities, or fail to file and report the test and evaluation effects.



100

Under which situation and what documents has a medical institution violated in the transport and temporary storage of medical waste, will the health department of local people's government at or above the county level shall order it to make corrections within a time limit, give it a warning and impose a fine?

The health department of local people's government at or above the county level shall order a medical institution to make corrections within a time limit, give it a warning and may impose a fine of not more than 5,000 *yuan*; if no correction is made within the time limit, a fine of from 5,000 *yuan* to 30,000 *yuan* shall be imposed if a medical institution fits any of the following circumstances stipulated in Regulations on the Management of Medical Waste and Measures for the Management of Medical Waste in Medical and Health Institutions in the management of medical waste regarding transport and temporary storage:

- (1) The temporary storage place, facility or equipment for medical waste does not meet the hygiene requirements.
- (2) The medical institution fails to put medical waste into special packaging bags or containers by category.
- (3) The medical waste transport tools in use do not meet the requirements.