ISWA TECHNICAL POLICY NO. 11

HEALTHCARE WASTE

Policy

ISWA advocates that proper attention is given to safe and sustainable management of health care waste. ISWA supports the sustainable management of healthcare waste by the segregation, storage, transport, treatment and final disposal of healthcare waste.

Position

ISWA supports the sustainable and safe management of resources and waste for healthcare facilities by advocating:

1) Proper attention being given to sustainable development subjects in the acquisition and use of resources minimising them where possible, reusing items when appropriate medically, maximising the recycling of materials and taking account of sustainable development issues in the management of wastes.

2) That there is a waste management plan and responsible properly trained and competence assessed waste manager in each healthcare facility and the plan is regularly reviewed. In addition all staff are trained in the management of waste within a healthcare facility.

3) The proper segregation of the hazardous waste from the waste that can be considered municipal solid waste. The collection and internal transport of the Hazardous Healthcare Waste in suitable containers and storage on suitable sites not exceeding recommended time duration of not more than 48 hrs which may be decided taking into consideration the local climatic conditions and if transported off the site they must be in containers that meet the requirements of the United Nations Recommendations on the Transport of Dangerous Goods by Road. Within Europe this is implemented by the legal agreement European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) we are now using the ADR 2005 Version.


ISWA also supports the view that due to the extensive practice of drug abuse and the growth in the amount of health care treatment being carried out in the home proper provisions should be made to ensure healthcare waste from minor sources is captured and treated appropriately

Current issues that particularly affect this waste stream

- Health care waste is a small but distinct waste stream associated with a highly rated perception of risk by the general public.
- It has a high profile in the media and with the public particularly when incidents occur and when it is intended to construct a facility for the treatment of the waste.
- The waste stream contains a wide range of hazardous materials as well as infectious materials i.e. chemicals, pharmaceuticals, cytotoxics, radioactive substances which can cause pollution of the environment.
- There are large proportions of materials and equipment used in healthcare that are designed to have a single use and this tendency continues to increase.
- Some materials are totally unsuitable for recycling.
- There is a culture within the healthcare professions and associated businesses of only considering healthcare and not giving consideration to the effects of their activities on the environment but this is changing particularly in industrialised countries in Europe and North America.
- There is an enhanced public awareness of infectious diseases and their hazards (HIV, HBV, HBC, CJD, SARS Avian influenza) and the possibilities of bio-terrorism.
- There is a significant potential for improvement in waste minimisation, segregation and recycling in all countries.
- The hazards of sharps play a highly significant part in contributing to the occupational risks associated with this waste stream (both physical and from the risk of infection). Reporting of sharps injuries has significant potential for improvement as has the resourcing and adoption of sharps safety devices.”
- At the present time incineration is considered to be the most acceptable means of disposal for some materials i.e. body parts, chemicals, etc.
- There is a continuous use of chemicals in healthcare. These are used for cleaning and disinfecting buildings and equipment as well as for the management of sick and injured’ patients. This situation requires constant vigilance and for the active promotion of the development and use of environmentally friendly products.
- The increase of healthcare being practised in the home requires special segregation systems to capture this waste stream and to ensure its proper treatment.
- The reuse of contaminated materials particularly sharps is still a major concern in a number of countries.
- Emission control standards for alternative technology treatment plants is a concern especially for heavy metals and VOC’s

The International Management of Healthcare Wastes

a) In many parts of the world the segregation of the hazardous portion of healthcare waste is not practised. It is also in these regions that the waste from healthcare facilities will be disposed of into dumps and in may cases these dumps have scavengers removing all materials that have a value or at worst they may be actually living on the dumps. It is a high priority to ensure that these situations are significantly improved
b) Recent reports suggest that each year there are approximately 8-16 million new cases of Hepatitis B Virus (HBV), 2.3-4.7 million cases of Hepatitis C Virus (HCV) and 80,000-160,000 of Human Immune Deficiency Virus (HIV) resulting from unsafe injections. These unsafe practices are attributable to, amongst other things, very poor waste management systems and the kind of practices that occur if there is not in operation a proper system of healthcare waste management. For example, injection devices may be collected and categorised for resale, either to medical establishments or for drug abuse. These devices are quite often not properly sterilised and this has led to severe public health problems.

c) Waste Incineration has had a long history in healthcare waste treatment in industrialised countries marred by the problems of inadequate gas cleaning causing nuisance to neighbours and the public. Fear of the production of dioxins by incineration plant, which continues to be highlighted by NGO’s, was also a contributory factor. With modern technology and high legal environmental standards incineration with energy recovery is a scientifically acceptable treatment system. If a mass burn municipal incinerator is used separate charging of hazardous healthcare waste is required or the waste can be pre treated using one of the alternative technologies. Gasification treatment systems are also used that are efficient in the production of heat and power.

d) Since 1978 there has been a rapid rise in the development of alternative technologies for the treatment of health care waste. Using heat, chemicals, microwaves or other radio waves to disinfect the waste the designs are numerous. There is a significant usage of these systems worldwide. There are not as yet any agreed international standards as to their efficacy or environmental standards. However standards have been created and through an iterative process continue to be refined. These standards are recognised by regulatory organisations as the “best available” and mainly deal with the efficacy of the treatment systems.

e) There is strong evidence to support the view that further research is required into the efficacy and environmental impact of all treatment systems.

f) The disposal of untreated hazardous healthcare waste to landfill is only an option in extreme circumstances where for example there is a conflict or there has been a disaster.

g) Risk is an issue when siting treatment and disposal facilities for healthcare waste and can be divided into two aspects.
(i) Perceived risk which, whether real or not is believed to result irrespective of any scientific validation
(ii) Actual risk is that which can be measured or inferred.
(Note) Perceived risk can be heightened by media attention and needs to be taken seriously and not dismissed
A risk management protocol needs to be developed and practiced at all healthcare facilities.

h) The novel technologies of total pyrolysis technology (not pyrolysis and gasification) and plasma technology do not have the track record or the regulatory framework to be serious contenders for healthcare waste treatment at the moment.