Main legislation relevant to Biosafety in HK

General duty under HK Occupational Safety and Health Ordinance Cap 509 Section 6 (1)

"Every employer MUST, as far as is reasonably practicable, ensure the safety and health at work of all his employees"


Clinical waste Legislation Cap354O
Came into force on August 1st 2011

Key Points of the legislation

A licensing system for all clinical waste collectors and disposal facility operators.

Clinical waste producers are to manage their clinical waste by consigning it to licensed collectors for delivery to a licensed disposal facility.

A consignment note (trip ticket) system tracks the movement of clinical waste from source to disposal facility.

The Chemical Waste Treatment Centre (Tsing Yi) is designated as the facility for treatment of clinical waste. A disposal charge for use of the facility.

It promotes "Codes of Practice" for large and small waste producers to provide guidance for both waste producers and collectors. (The University is considered a small waste producer despite generating around 50,000Kg of clinical waste a year)

What is clinical waste? Material generated in connection with various medical, veterinary or laboratory activities.

Group 1 - Used or Contaminated Sharps
Group 2 - Laboratory Waste
Group 3 - Human and Animal Tissues
Group 4 - Infectious Materials (from patients with a specified list of high risk agents)
Group 5 - Dressings
Group 6 - Other Wastes

Clinical Waste -Sources of Information

Legislation Cap354O
Came into force on August 1st 2011

Environmental Protection Department dedicated web pages www.epd.gov.hk/epd/clinicalwaste/
Includes downloadable copies of the Code of Practice

University policy - Safety Office website
http://www.safety.hku.hk/homepage/pdf/CWD.pdf

Waste producers have a duty of care to:

- Segregate clinical waste from other waste streams
- Package and label clinical waste properly for easy identification
- Provide safe and secure temporary storage area
- Ensure staff take necessary safety measures and receive sufficient training

Group 1 - Used or Contaminated Sharps
Group 2 - Laboratory Waste

Autoclaved or disinfected materials are not considered clinical waste.

Group 3 - Human and Animal Tissues

Includes:
- Biopsies,
- Blood,
- Sections,
- FACS sorted cells etc.

Group 4 - Infectious Materials

Materials from patients with CCHV/Ebola/Lassa etc or infected cultures.

Group 5 - Dressings

Dribbling, caked or containing free flowing blood.

Group 6 - Other Wastes

Specified by Director - certain medical cases may pose significant risk.

What isn't clinical waste?

1) Radioactive waste, whether arising from medical sources or not, as defined under the Radiation (Control of Radioactive Substances) Regulations (Cap. 303A);  
2) Chemical waste as defined under the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) including cytotoxic drugs;  
3) Dead animals and animal tissues, organs and body parts arising from veterinary practices, abattoirs, pet shops, farms, wholesale and retail markets, Chinese medicine practices, or domestic sources; and Human corpses.

Groups of Clinical Waste

<table>
<thead>
<tr>
<th>Groups of Clinical Waste</th>
<th>Type(s) of Container</th>
<th>Colour</th>
<th>Sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 - Used or contaminated sharps</td>
<td>Sharps box</td>
<td>YELLOW or combination of YELLOW and WHITE</td>
<td>Proprietary closure</td>
</tr>
<tr>
<td>Group 2 - Laboratory waste</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3 - Human and animal tissues</td>
<td></td>
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</tbody>
</table>

Packaging Requirements for Different Groups of Clinical Waste.

In practice most clinical waste from HKU will be packed in red bags.

Even small amounts of human and animal tissue can be put in red bags.

ALL BAGS TO BE LABELLED WITH DEPARTMENT AND PRODUCER BAR CODE.

From EPD website
Handling

(a) check that storage bags, boxes and drums are effectively sealed; <80% full;
(b) handle bags by the neck only; trolleys?
(c) handle sharps containers and plastic drums safely;
(d) avoid damaging the packaging and not throw it, drop it, drag it along the ground or step on it;
(e) know the procedure in the event of accidental spillage and to report accidents;
(f) check that the seal of any storage container is unbroken when movement is complete;
(g) understand the special problems related to special types of clinical wastes, e.g. sharps,
(h) spillage protocols

<table>
<thead>
<tr>
<th>Collection of Clinical Waste: Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
</tr>
<tr>
<td>Refuse Room, Faculty of Medicine Building</td>
</tr>
<tr>
<td>Refuse Room, Pauline Chan Building Laboratory Animal Unit</td>
</tr>
<tr>
<td>Refuse Room, Kadoorie Biological Science Building Refuse Room, Mong Wah Complex</td>
</tr>
<tr>
<td>QMH, Pathology building: Institute for Human performance</td>
</tr>
<tr>
<td>HK Jockey Club Interdisciplinary Research building</td>
</tr>
</tbody>
</table>

In the summer months animal carcasses deteriorate quickly and should not be placed in the yellow collection bins before 12.00 on the day of the collection.

Under the Current Arrangements - 5 sites are registered with EPD, and there are 7 pick up points.

Record Keeping - legal requirement

Must include:-

- The date of consignment/delivery;
- The quantity of clinical waste consigned/delivered;
- The address of the premises from which the clinical waste is delivered;
- For consignment to a licensed collector, the name of the licensed collector.

"Pickup" points

Some modification to make more safe and secure

Examples of poor practice

i) Poorly packaged materials
ii) Non-clinical waste in the bins e.g. broken glass
iii) Bags in the wrong bins
iv) Bags without producer codes or departmental labels
v) Bags on the floor or in over-full bins
Import / Export controls

Implementation of BWC convention in HK - CAP 606, point 3 biological, chemical nuclear weapons. Licences are required for potentially dual use agents - listed in an Appendix. Includes Influenza H5N1, etc.

Implementation of the International Health Regulations in HK - CAP 599
Licenses are required when:
1. Importing any disease causing infectious agent from overseas
2. Obtaining from overseas cell lines containing infectious agents.
3. Obtaining from overseas samples of any kind including clinical material where there is a reasonable expectation that a disease causing infectious agent could be present.
4. Importing to Hong Kong samples obtained from overseas field trips that might contain a disease causing infectious agent.
5. Importation of infectious samples for laboratory accreditation exercises.

Implementation of Cartajena protocol in HK - CAP 607
Import and export of Genetically Modified Organisms. Shipping labels etc.

Transportation of Infectious Substances and Biological Substances

- UN Committee of Experts on Dangerous Goods, UN Model Regulations on the Transport of Dangerous Goods
- International Civil Aviation Organization (ICAO), Technical Instructions for Safe Transport of Dangerous Goods by Air
- International Air Transport Association (IATA), Dangerous Goods Regulations
- Regulations for transport by Road, Rail and Sea in many countries

Most slides from NIH/WHO

Triple Packaging

Primary receptacle (labeled, primary water tight, leak proof receptacle containing the specimen)
Secondary receptacle (durable, water tight, leak proof receptacle containing primary receptacle)
Outer shipping package (rigid, bearing forms, permits, etc.)

Requirements for Biological Substances

- Basic triple packaging, meets IATA Packaging Instruction 650
- May contain up to 500ml not to exceed 4 L
- Labels marked with diamond with UN 3373 inside and Biological Substance, category B

Local "Transport" (in and between labs and buildings)

- Organise to minimise.
- Use primary and secondary leak proof containers for high titre stocks.
- Avoid carrying unpackaged tubes or racks in common areas - use screw caps if possible.
- Use containers where possible.

Please note recent university guidance:
"The safe transport of infectious materials and import/export requirements for Hong Kong"

Practices & procedures

Use leak-proof transport containers

Even transport from the centrifuge