Training on Medical Waste Management

in Collaboration with
Al-Essa Medical & Scientific Equipment Co. W.L.L

Global Perspectives on Medical Waste Management

Kuwait University
Health Science Center
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Presentation Outline

1. Global Perspective
2. Environmental Health and Safety Issues
3. Risk Assessment
4. Definitions of Medical Waste - WHO
5. Management of Waste in the Facility
6. Decontamination
7. Transport, Treatment / Disposal of Medical Waste
8. Practicing Safe Science video

Quiz!!!!!!
Waste Management is a Process Not a Technology.
What’s in a Name / Definition??

- Biohazardous Waste
- Biomedical Waste
- Clinical Waste
- Healthcare Waste
- Hospital Waste
- Infectious Waste
- Medical Waste
- Regulated Medical Waste
HTM 07-01 NHS UK

Is this what it really looks like???
Waste Management Hierarchy

Most preferable

Prevent
Reduce
Reuse
Recycle
Recover
Treat
Dispose

Least preferable
Typical Laboratory Hazardous Wastes

Which are hazardous?
Global Perspective – Actual Practices

Different Cultures but common themes to Waste Management
Applicability of information on Healthcare Waste Management

- **Global Level**
  - International Healthcare Waste Guidelines
    - General

- **National Level**
  - Healthcare Waste Guidelines and Regulations
    - Country Specific

- **Local Level**
  - Facility Healthcare Waste Management Plan
    - Unique to each Facility
      - Best Available Practices
World Health Organization

Introduction to Legislation

International Agreements and Principles

• Basel Convention
• Polluter Pays Principle
• Precautionary Principle
• Duty of Care Principle
• Proximity Principle
Basel Convention, 1989

- Coordinated by the United Nations Environment Programme (UNEP)
- Signed by more than 100 Nations (Parties)
- Controls transboundary movements of hazardous waste
Polluter Pays

All waste producers are legally and financially responsible for:

• safe handling
• environmentally sound disposal
• creating an incentive to produce less
Precautionary Principle

Where risk is uncertain or unknown:
• Assume risk is significant
• Plan protection measures accordingly
“Duty of Care” for Wastes

The “duty of care” principle stipulates that any person handling or managing hazardous substances or related equipment is ethically responsible for applying the utmost care.
Proximity Principle

Treatment and disposal of waste takes place as near as possible to the point of production as is technically and environmentally possible.
Typical Waste breakdown in Healthcare Facilities


- General non-infectious: 85%
- Infectious (hazardous): 10%
- Chemical/radioactive (hazardous): 5%
Total Healthcare Waste generation in Hospitals (in kg/bed-day)

Points represent reported averages; vertical lines are reported ranges of data.

Low-income Countries: 1-Bangladesh (includes clinics), 2-Cambodia, 3-Lao PDR, 4-Nigeria, 5-Vietnam, 6-Pakistan, 7-India;

Middle-income Countries: 8-Guyana, 9-Philippines, 10-Jordan, 11-Columbia, 12-Peru, 13-Thailand, 14-Iran, 15-Brazil (includes health centers and labs), 16-Turkey;

High-income Countries: 17-Portugal, 18-Kuwait, 19-United States
Infectious Waste generation in Hospitals (in kg/bed-day)

Points represent reported averages; vertical lines are reported ranges of data. Low-income Countries: 1-Bangladesh (includes clinics), 2-Cambodia, 3-Nigeria (poor segregation), 4-Vietnam, 5-India; Middle-income countries: 6-Guyana, 7-Philippines, 8-Columbia, 9-Thailand, 10-Iran (poor segregation), 11-Bulgaria, 12-Brazil (includes health centers and labs-poor segregation); High-income Countries: 13-Taiwan (China), 14-Portugal, 15-Hong Kong (China), 16-Kuwait (poor segregation), 17-Italy, 18-United States