



# Issues and Challenges of Health Care Waste Management in Indonesia: Experience from Bali

**SESSION II: Hospitals and Sustainable Practices  
"Eco-Friendly Hospitals For A Sustainable World"**

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# Issues on Medical Waste Management

- **Medical waste segregation**

- Needle syringe occasionally mis-placed in non-medical or non-sharp waste bin (storage)
- Improper handling of syringe tubes and needles in waste storage area
- Needle safety boxes and destructor are not used
- Not optimal segregation and illegal dumping

- **Incinerator**

- Open burning of medical waste or expired medicines
- Hospital incinerator without permit
- Incinerators not properly monitored
- Overused incinerators

- **Waste transportation**

- Poor service from the transporting company, or transported by the health staff
- No proper labelling during transport



# Issues on ... (Cont.)

- Overall waste facilities
  - Poorly designed temporary waste storage facility
  - Inadequate waste water treatment facilities (e.g. simple septic system)
  - Weak maintenance of WTP: improvised repairs
- Improper hazardous waste storage and disposal
  - Mercury from broken health equipment
  - Batteries
  - Chemicals



Improper temporary waste “storage” on the “roof top”



# Other Environmental Management Issues

- Resource conservation:
  - Saving energy
  - Water conservation
  - Recycling waste



Indonesian Regulation on Hospital Environmental Health Management 2004

# Challenges



# Individual Challenges

- NIMBY syndrome (Not in my backyard)
  - Medical staff do not consider risks for cleaning staff
  - Unawareness of risk at the end of disposal
- Health facilities management believe that investment in waste management is not profitable



Needle syringe in open dumping of general waste, Source: <http://www.adivampciel.com/2012/09/skripsi-gue-itu-mesin-cuci.html>

# Environmental Challenges

- Providing supportive environment for handling sharps waste
  - The sharp boxes are not 'ready to use' (need to be assembled).
  - Sharp boxes inconveniently placed
  - Temporary disposal areas easily accessed by third party (scavengers)
  - The capacity of needle destructor given to health facilities cannot keep up with the generation of needle waste
- Integrating waste management planning in building design
  - The waste management facilities are not included in early design of overall building
- Providing temporary storage for hazardous waste at municipal level



Medical waste in  
Community Health  
Centre



Medical waste in Sumatra.

Source:  
<http://pekanbaru.tribunnews.com/2013/01/10/volu-me-sampah-medis-rsud-meningkat>



# Structural Challenges

- Increase environmental health concern among **health professionals**
  - Lack of emphasis of **waste impact and management** in **education curriculum of health professionals**
- Convince hospital management about the **cost benefit of environmental management**
  - Encourage clear policy on **recycling** of some types of waste from health facilities (syringe, infusion tube, plastic containers)
  - Encourage clear policy on handling sharp waste and other medical waste
  - Allocate **budget** for waste management (handling medical waste is expensive)
  - Encourage adopting “**Green Hospital**” concept
- Provide clear policy and transparent process for **permit** of waste management service (national and local)
  - Complicated bureaucracy and long process for permit of incinerator and waste management service
  - Should encourage other types of medical waste treatment other than incinerator





# Service Challenges

- Proper service for transportation of medical waste is limited
- Few commercial waste management services with proper licenses.
- Municipality does not have temporary storage for hazardous waste (for medical waste ash, batteries, chemicals) → share cost.
- Lack of maintenance and monitoring service for incinerator

It is a  
*“problem of management not technology”*  
 (Ananth et al. 2010)

**Table 1**  
 Stages of HCWM and compliance with WHO standards.

Country	Segregation	Storage	Transport	Treatment	Disposal
Cambodia	○	○	⊙	○	⊙
China	⊙	○	○	○	⊙
Indonesia	⊙	⊙	⊙	○	⊙
Japan	○	○	○	○	○
Lao PDR	⊙	⊙	⊙	○	⊙
Malaysia	○	○	○	○	○
Mongolia	○	⊙	○	○	⊙
Myanmar	○	⊙	⊙	○	⊙
Philippines	○	○	○	○	○
Singapore	○	○	○	○	○
Thailand	○	⊙	○	○	○
Vietnam	○	○	○	○	○
	○ Followed	⊙ Partial		⊙ Not followed	

# Where to start?

International Network for Health Promoting Hospitals & Health Services

## The Task Force on Health Promoting Hospitals and Environment

Asia-Pacific Regional Symposium 2016

### Eco-Friendly Hospitals For a Sustainable World

22-23 February 2016 | Griffith University | Brisbane | Queensland | Australia



Program BOOKLET

AN INTERNATIONAL KNOWLEDGE AND PRACTICE SHARING REGIONAL SYMPOSIUM ON

### "ECO-FRIENDLY HOSPITALS FOR A SUSTAINABLE WORLD" MONDAY, 22<sup>nd</sup> Feb 2016

Griffith University, Nathan Campus

Hosted by The Task Force on Health Promoting Hospitals and Environment  
of International Health Promoting Hospitals and Health Services Network  
and co-hosted by Griffith University

Venue: Griffith University Nathan Campus, Building N18 (Central Theatre), Theatre B

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