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10th Pacific Islands Conference
NATURE CONSERVATION AND PROTECTED AREAS
Nature Conservation Action for a Resilient Pacific

Transitioning to a Post-Pandemic Pacific Webinar Series

Medical Waste Management During a Pandemic

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Why the focus on medical waste?

- Many types of additional medical wastes are generated
  - Infected masks, gloves, gowns, and other PPE.
- Higher volume of non-infected waste items
- Possible mixing of medical waste with household wastes
- Possible spread of infection

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Key steps to managing medical waste in pandemics

- Clear demarcation of responsibilities over medical waste
- Allocation of additional resources to medical institutions
- Designing effective medical waste management plans

Effective medical waste management plans

- An officer to be appointed to develop a waste management plan and to have overall responsibility for its day-to-day implementation and monitoring.
- Plans to address:
  - Location and organization of collection and storage facilities
  - Design specifications
  - Required material and human resources
  - Responsibilities
  - Waste Management Procedures
  - Monitoring and training
  - Minimization of wastes through enabling purchasing policies

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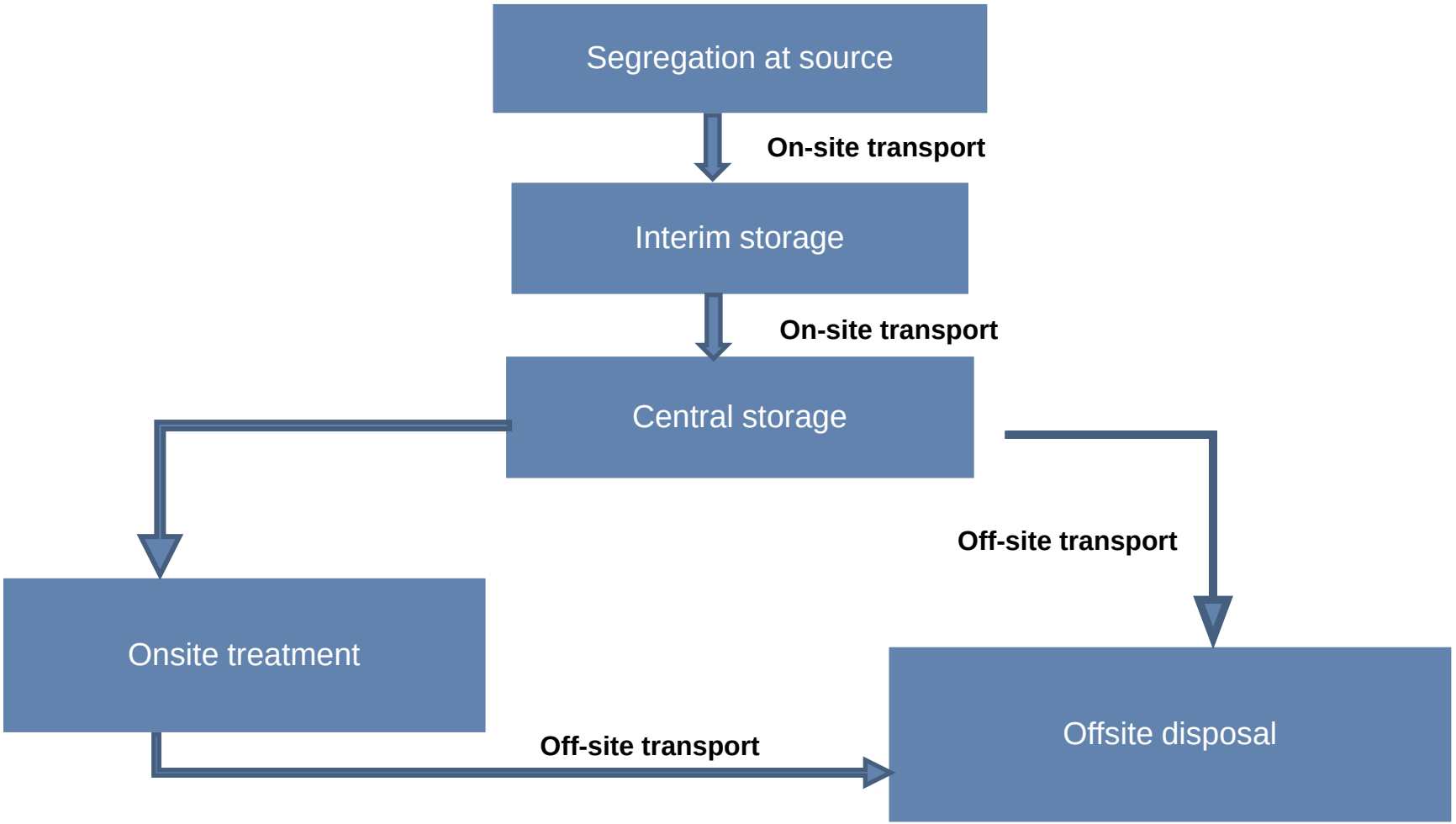
Basic elements of a medical waste management plan



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Segregation

- Must be carried out as close as possible to place of generation
- Poorly segregated waste should not be re-sorted. If hazardous wastes is accidently mixed with non-hazardous, it must be treated as hazardous waste.
- Colour coding makes it easier for medical staff and hospital workers to put items into correct containers and to maintain segregation of waste during transport, storage and disposal.
- Containers must not be allowed to accumulate in places accessible to unauthorised personnel or the public
- Containers and bags should be filled no more than three quarters of their capacity and then sealed
- Containers and bags should be labelled with the type of waste, point of generation, date and where possible, weight.
- Segregated waste should be regularly removed and safely stored to reduce the risk of transmission of pathogens and improve general hygiene and cleanliness

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Storage

- Interim storage in medical departments
  - Where possible, hazardous waste generated in medical areas should be stored in locked utility rooms
  - If no utility room, wastes can be stored at designated locked location near medical area but away from patients and public
  - Closed containers stationed indoors close to medical areas can also be used for interim storage. Must be clearly labelled and locked
- Central storage
  - Areas where different types of waste are brought for safe retention until collection for transport off-site or until disposal
  - Must be impermeable, well drained hard standing floor, easy to clean and disinfect
  - Readily available water supply for cleaning and washing
  - Lockable to prevent access by unauthorised persons
  - Secure from entry by animals and free from insect and rodent infestation
  - Well-lit, ventilated and shaded from the sun
  - Sited away from food preparation areas and general storage
  - Have spillage and containment equipment

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Storage

- Infectious and pathological waste
  - Must be stored separately from other hazardous waste at a temperature no higher than 8ºC to prevent putrefaction
  - If refrigerated storage is not available, storage times should not exceed 24 or 48 hours
  - Floors and walls must be disinfected as soon wastes are removed
  - Area must be identified using the biohazard sign.
- Chemical waste
  - Storage place must be an enclosed area and separated from other waste storage areas
  - To avoid dangerous chemical reactions, must have separate storage for
    - Explosive, corrosive acid, corrosive alkali, toxic, flammable, oxidative, halogenated solvents, and non-halogenated solvents.
  - Cytotoxic waste must be stored separately
  - Mercury waste should be kept segregated
  - Pharmaceutical wastes with non-hazardous can be stored in non-hazardous storage area
- Low-level radioactive waste
  - Store for decay in shielded container. Should be identified with radiation warning symbol (trefoil)

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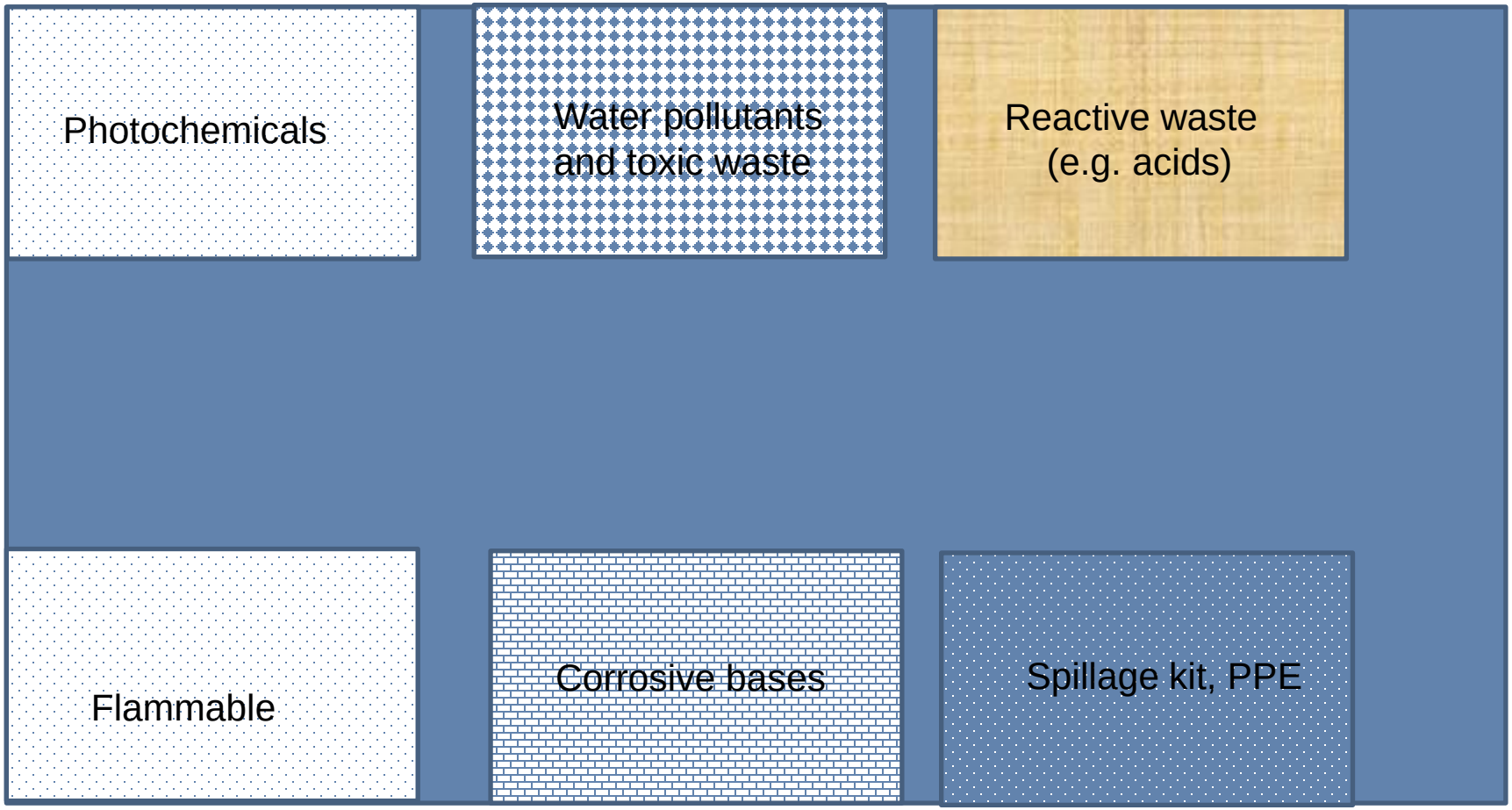

Sample outline of chemical storage room

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Transport

- **On-site transport**
  - Should take place during less busy times and using set routes to prevent the exposure of staff and patients
  - Routes must be from “clean to dirty” i.e: most hygienically sensitive medical areas to other areas.
  - Hazardous and non-hazardous waste should be transported separately; infectious waste should not be transported with other hazardous waste
  - Transport equipment must be able to contain leaks and easy to clean and drain
  - Never transport waste by hand!
  - Transport personnel must wear appropriate PPE: heavy duty gloves, safety shoes, industrial aprons, overalls and face masks
- **Off-site transport**
  - Must be carried out by a licensed, permitted or authorised carrier, in a vehicle used exclusively to transport medical waste
  - Vehicle should be fully enclosed with an internal finish for disinfection.
  - If the service is provided by a contractor, all information on safe working procedures must be shared.
  - Vehicle must carry plastic bags, PPE, cleaning equipment and disinfectant and spill kits.

Treatment

- Treatment technology should be carefully selected based on the characteristics, technological capability and requirements, environmental and safety factors, and costs
- Treatment methods/technology include:
  - Incineration using BAT
  - Chemical disinfection
  - Autoclave
  - Microwave
  - Encapsulation
  - Specially engineered landfills
  - Discharge to sewer

Waste category	Incineration using BAT	Chemical disinfection	Autoclave	Microwave	Encapsulation	Specially designed landfill	Discharge to sewer	Others
Infectious waste	Yes	Small quantities	Yes	Yes	No	No	Only urine & faeces	
Pathological waste	Yes	No	No	No	No	No	No	
Sharps	Yes	Yes	Yes	Yes	Yes	No	No	
Pharmaceutical waste	Yes	No	No	No	Yes	Small quantities	No	Return to supplier
Cytotoxic waste	Yes	No	No	No	No	Exceptional cases	No	Return to supplier
Chemical waste	Small quantities	No	No	No	No	Exceptional cases	Small quantities	Return to supplier
Radioactive waste	Low-level radioactive waste	No	No	No	No	No	Low-level radioactive waste	Decay in storage; return to supplier

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End of presentation

Questions can be directed to:

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