

# Healthcare Waste: What goes where?

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# What is waste?

## Legal definition:

“Any substance or object the holder discards, intends to discard or is required to discard”.

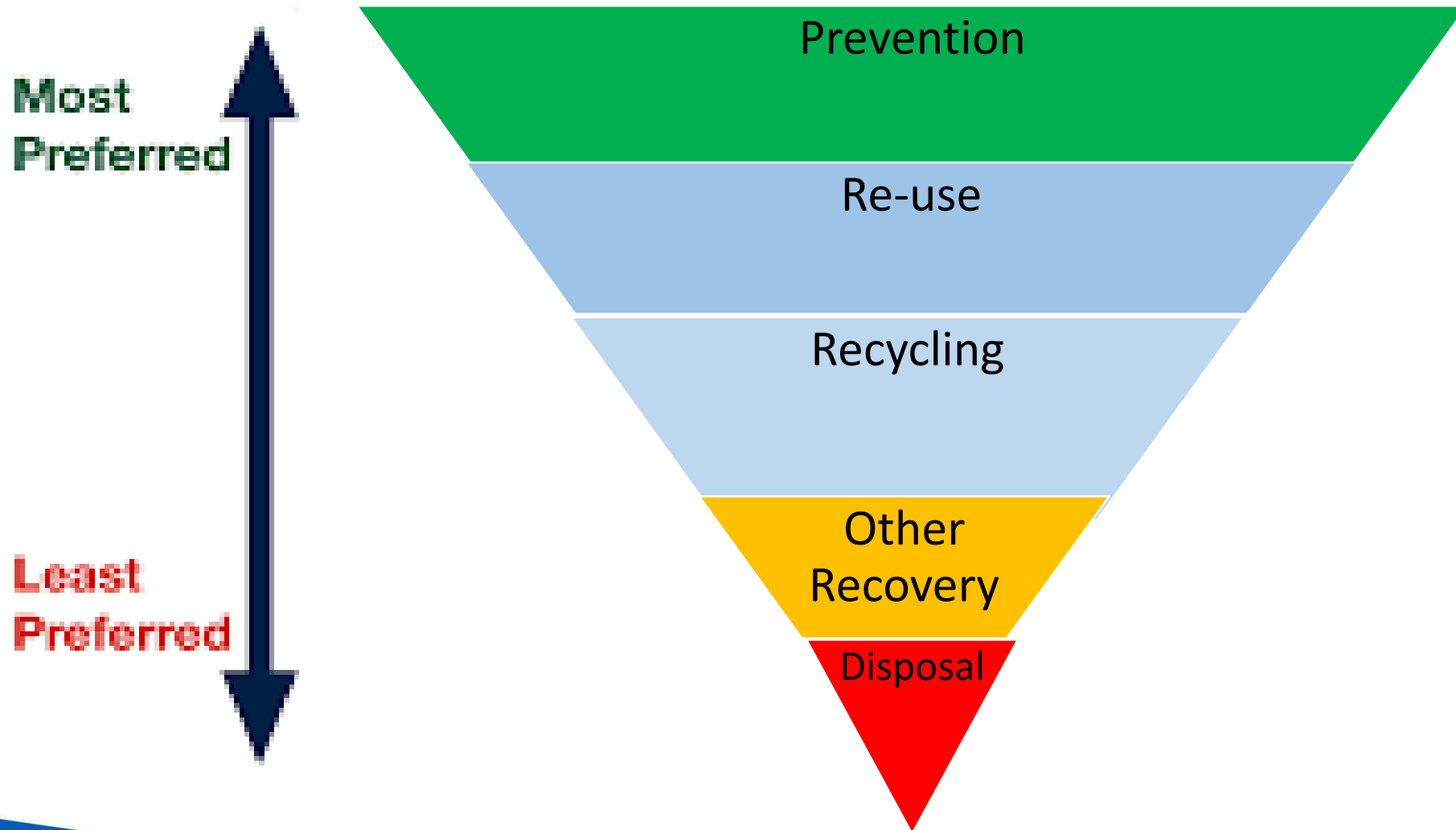
## Waste Framework Directive 2020

# Context...why look at waste?

- There are 1.5 million NHS employees in England alone to date. That is a lot of waste being generated on a daily basis.
- Primary Care prescriptions in England cost £9.4 billion a year, of which **10-30% are not used (wasted)**..this starts in supply, through to the prescription process, then to Pharmacy, then straight to the bin.
- The NHS in England spends around **£109million per annum disposing of waste**. This equates to 0.068% of the NHS' overall budget.
- Waste Duty of Care, (2018) states that staff segregating waste **must be provided with appropriate training** and clear instructions on waste segregation, **specifically with regards to which items go in which container**.

# Waste Hierarchy

# Waste Hierarchy



## **Primary objective:**

Is to ensure that all of the materials produced are handled, treated and disposed of safely, cost effectively and in a manner that does not impact negatively on the environment.

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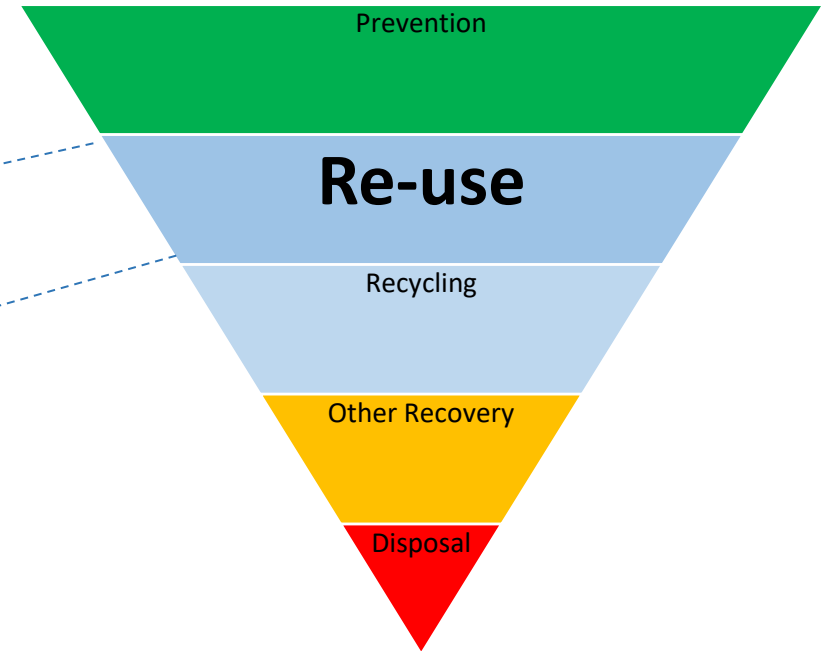
# Prevention



## Consider the following before use:

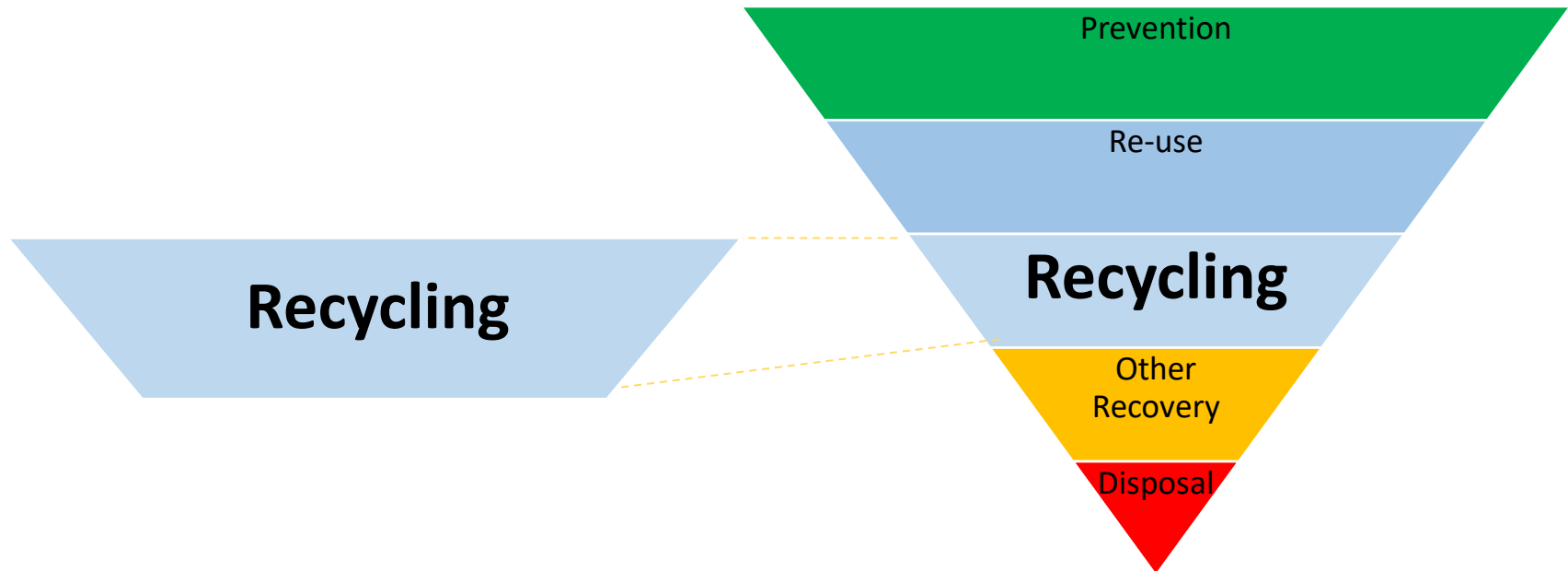
- Do you need the product?
    - What is the minimum quantity needed?
    - Is a reusable alternative available?
      - Refer to instructions for correct use
        - Refer to instructions to prepare for reuse (*if applicable*)
- **Reduce waste as much as you can**

# Re-use



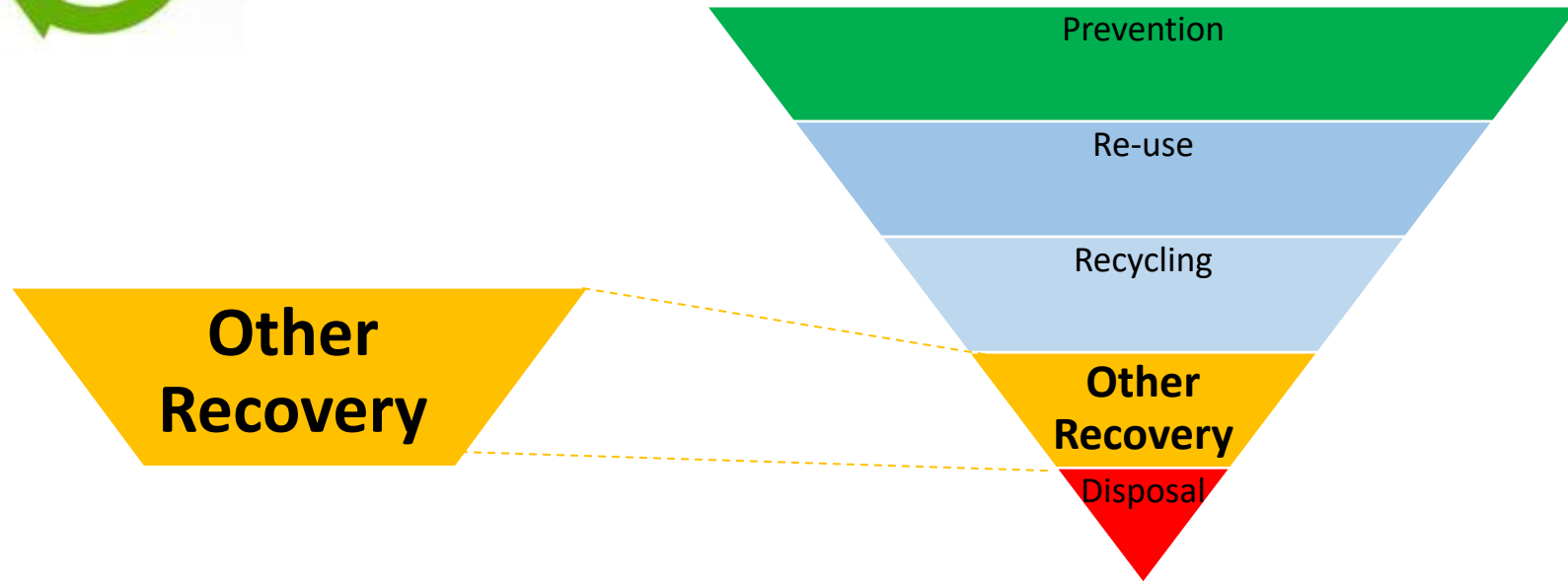
- Invest in re-usable items
- Reuse items in their existing form

# Recycling



**Recycle appropriately: i.e. drink cans and bottles, paper and card etc**

# Recovery



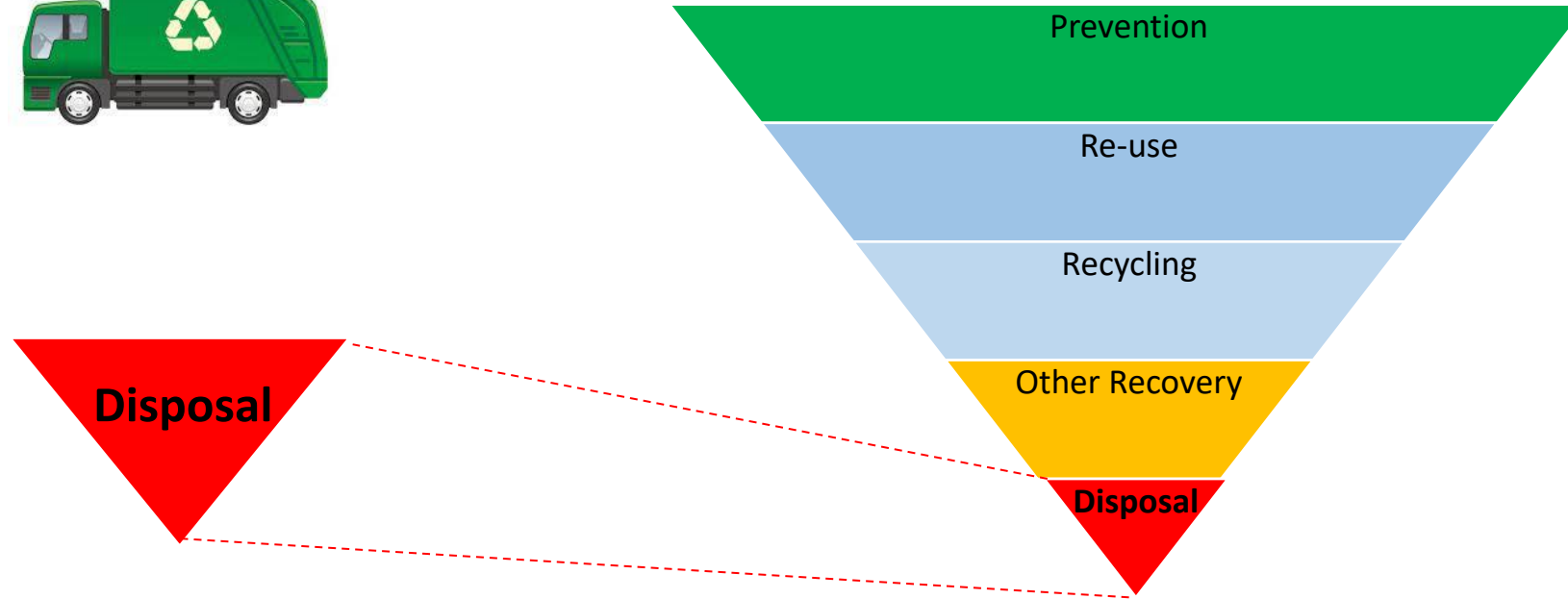
## ➤ Sending waste to an EfW (Energy from Waste) facility

➤ Hazardous waste incinerators: burn for a longer time

➤ Municipal and EfW: burn at around 150 degrees lower than hazardous waste incinerators. (Still talking 850 degrees Celsius)

**N.B.**

# Disposal



- EfW
  - Incinerators
  - Landfill
- In 1986 the NHS had to comply with Health & Safety legislation due to loss of Crown Immunity from prosecution
  - Historically, incineration was the main waste disposal method - especially in hospitals.
  - Commercial incinerators were introduced in 1992/1993

# Waste Classification

# Three main clinical waste streams in Primary care



**Tiger/Offensive waste**

**Disposal method:**  
(EfW/Incineration)



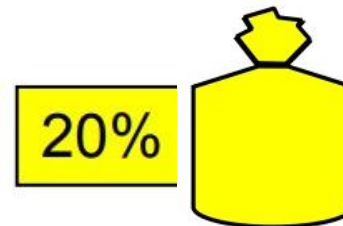
**Clinical/infectious waste:**

**Disposal method:**  
(Alternative treatment/  
incineration)



**Domestic**

**Disposal method: landfill**



Incineration waste only:  
yellow, red, purple and blue.

# What to put where:



- Used non-infectious PPE
- Single-use items e.g. (tongue depressors, speculas)
- Swabs (from non-infectious sources)
- Dressings (from non-infectious patients)
- Surface cleaning wipes
- Soiled couch roll (from non-infectious sources)
- Incontinence pads
- Nappies



- Wound dressings (from known/suspected infectious source)
- Wound swabs
- PPE
- Soiled couch roll
- Cervical screening kits

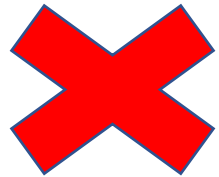


**Food based waste**  
**Used paper towels**

# Types of healthcare waste disposal methods

1. Incineration
2. Alternative Treatment
3. Energy for Waste
4. Landfill

# High Temperature Incineration



Expensive to dispose of



Least environmentally friendly

# Alternative Treatment



For **Infectious** waste only

A better alternative to High Temperature Incineration



Still expensive to dispose of

# Energy for Waste



For **non-infectious** waste only



**Cheapest** clinical waste stream to dispose of



**Less** carbon intensive

# Cost Analysis



£80 per tonne



£120 per tonne



£360 per tonne



£500 per tonne



£1000 per tonne

# Handling Waste

- Appropriate IPC measures must be adhered to: e.g. correct use of PPE
- Bags must not be overfilled (**no more than two-thirds full**)
- All waste must be **segregated correctly** - sharps always go in a sharps bin
- **Swan necked** (neck of bag twisted, bent in half, and fastened)
- Securely **tied using a plastic tie or secure knot**
- Correctly **labelled**

# Incorrect segregation

Incorrect bin tag and incorrect sacks



Different coloured sacks put inside other colour sacks



Foreign item/ item not accepted at the treatment facility

# To conclude..

## Remember to:

- ❖ Prevent waste as much as you can
- ❖ Reduce
- ❖ Correctly segregate
- ❖ Re-use
- ❖ Recycle
- ❖ Generate for energy sources
- ❖ Apply standards infection prevention precautions at all times when handling waste

Correct management of waste management will prevent risks to human health, in turn keeping individuals and the environment safe from harm.

[The importance of using the correct bin in healthcare \(youtube.com\)](#)

**Thank you for listening**

**Are there any questions?**

# References

[NHS England » National infection prevention and control manual \(NIPCM\) for England](#)

[Health Technical Memorandum 07-01: Safe and sustainable management of healthcare waste \(england.nhs.uk\)](#)

[Waste duty of care: code of practice \(accessible version\) - GOV.UK \(www.gov.uk\)](#)

[Waste Framework Directive - European Commission \(europa.eu\)](#)