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## Our moral and ethical responsibility towards the environment

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3Clinical CPD Points

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### Objectives:

After reading this article the reader should be able to

- Understand the classifications of waste
- Audit or implement a responsible waste management program in the practice

### Baseline reading:

Do providing healthcare professionals with data about their performance improve their practice?  
(The Lancet Aug 2008)

<http://www.thelancet.com/cms/attachment/2000996337/2003693501/mmc6.pdf>

Or for a more reader-friendly version, read

[http://www.cochrane.org/CD000259/EPOC\\_audit-and-feedback-effects-on-professional-practice-and-patient-outcomes](http://www.cochrane.org/CD000259/EPOC_audit-and-feedback-effects-on-professional-practice-and-patient-outcomes)

Dentistry is not a very “green” profession. As seen last month, we are ethically obliged to consider the environment in fulfilling our duties.

Just think of the carbon footprint of all our products. With everything being imported, imagine the amount of greenhouse gases produced to replace one amalgam filling with a composite. We are responsible for the dental materials and by-products used in the surgery from cradle to grave.

As seen in the systematic review published in The Lancet (Aug 2008) above, putting in place systems and controls-no matter how small- will improve the way we practice.

Our actions do not just touch the lives of our patients. It reaches much further, and affects a whole community.

To discard of medical waste, the HPCSA gives us a set of clear guidelines.

Please read:

[http://www.hpcs.co.za/Uploads/editor/UserFiles/downloads/conduct\\_ethics/rules/generic\\_ethical\\_rules/booklet\\_16\\_booklet\\_on\\_the\\_health\\_care\\_waste\\_management.pdf](http://www.hpcs.co.za/Uploads/editor/UserFiles/downloads/conduct_ethics/rules/generic_ethical_rules/booklet_16_booklet_on_the_health_care_waste_management.pdf)

Further discussion:

The World Health Organisation (WHO) classifies medical waste (referring in this newsletter only to waste generated in a dental practice) as follow:

**Hazardous waste:**

- **Sharps waste**  
It refers to all used or unused needles, syringes, scalpels (or other blades) or broken ampoules.
  
- **Infectious waste**  
This is any disposable material that may contain or carry enough pathogens to spread disease. This includes used gloves, masks, gauze, cotton rolls, bibs, disposable suction tips or any other material that has been in contact with blood or saliva.
  
- **Pathological waste**  
Pathological waste could be considered a subcategory of infectious waste, but is often classified separately – it refers tissue, organs and body parts.
  
- **Chemical, pharmaceutical and cytotoxic waste**  
It refers to amalgam, used/expired disinfectants and used X-ray developing liquids.  
As professionals, it is our duty to protect the community and to discard these products in a responsible way.

**Non- Hazardous waste**

This is the waste that does not pose any biological, physical or chemical risk and can either be recycled or collected by the municipality.

When throwing something away, take a moment and ask yourself: where is away? Does the picture that comes to mind look healthy and safe for both man and the earth? To help Mother Earth digest the incredible amount we leave for her to deal with, the following products should be recycled:

- Corrugated cardboard boxes
- Newspapers and magazines
- Polyethylene terephthalate (PET or PETE) (e.g. plastic water bottles, soft-drink bottles)
- Polystyrene packaging
- Paper (e.g. white office paper, computer printer paper, coloured ledger paper)
- Metals (e.g. aluminium beverage cans and containers, food tin cans, other metal containers like local anaesthetic packaging )
- High-density polyethylene (HDPE) (e.g. plastic milk containers, containers for food)
- Clear, coloured or mixed glass

- Left-over gum guard/ laboratory materials
- Construction and demolition debris

Ethics are the moral principles that govern our behaviour or the way we do things. Although there are laws and guidelines to protect man and the environment, each individual will decide for him/herself what impact they want to make. Think of the world you want to leave behind for generations to come.

**To help you audit/implement a responsible waste management system, here is a “to do list”:<sup>[4]</sup>**

1. Print and display a waste management plan for the practice.
2. Print and display a protocol for needle-stick injuries.
3. Have a training session to familiarise every team member with these protocols.
4. Ensure the practice follows the SABS’s colour-coded waste separation system.
5. Ensure extracted teeth with amalgam ARE NOT part of the hazardous waste and is kept separately for recycling.
6. Keep amalgam rests, lead foils and fixer in marked containers for metal recovery.
7. Familiarise yourself with the protocols of the registered waste management company you use. Remember the cradle to grave principal? Handing waste over to the waste management company is not the end of your responsibility.
8. File and keep the collection and incineration certificates from the above mentioned company.
9. Make sure the sharps container you use is leak and puncture proof.
10. Are there enough waste bins in the practice?
11. Do you have a designated area for sealed waste that is awaiting collection?
12. Ensure this area is clean, pest free and securely locked.
13. Create your own laminated list of tasks and duties where various members of the team can tick off their duties when it is done.
14. Re-look at your system regularly

Here are links to various registered waste management companies:

<http://www.clinx.co.za>

<http://www.compasswasteservices.co.za>

<http://www.vikelawastecare.co.za/index.html>

<http://www.wasteman.co.za>

<http://www.sharpmed.co.za>

For more reading:

<http://www.cdc.gov/oralhealth/infectioncontrol/pdf/safe-care.pdf> see p 11

[http://apps.who.int/iris/bitstream/10665/85349/1/9789241548564\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/85349/1/9789241548564_eng.pdf)

[http://www.cdc.gov/OralHealth/infectioncontrol/faq/extracted\\_teeth.htm](http://www.cdc.gov/OralHealth/infectioncontrol/faq/extracted_teeth.htm)

Sources:

1. <http://www.cdc.gov/niosh/docs/2004-101/chklists/r1n79m~1.htm> last accessed 19.11.2016
2. [http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/conduct\\_ethics/rules/gen\\_eric\\_ethical\\_rules/booklet\\_16\\_booklet\\_on\\_the\\_health\\_care\\_waste\\_management.pdf](http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/conduct_ethics/rules/gen_eric_ethical_rules/booklet_16_booklet_on_the_health_care_waste_management.pdf) last accessed 19.11.2016
3. [http://ohd.moh.gov.my/v3/images/pdf/infection\\_control2007.pdf](http://ohd.moh.gov.my/v3/images/pdf/infection_control2007.pdf) last accessed 19.11.2016
4. Infection prevention and control audit- feedback instrument for oral health care in South Africa by Dr Jeanne Oosthuysen ( This book is a valuable tool and guide and every practice should have a copy)

Go forth. Make the changes- doesn't matter how small. Be the best you can possibly be!

### Question time.

1. An audit and feedback process is
  - a. An external exam
  - b. Where an individual's professional practice is measured and then compared to professional standards or targets.
  - c. Where an individual's professional performance is measured and then compared to professional standards or targets.
  - d. B and c
2. Audit and feedback may be most effective when:
  - a. the health professionals are not performing well to start out with
  - b. the person responsible for the audit and feedback is a supervisor or colleague
  - c. it is provided more than once
  - d. all of the above
3. Including clear targets and action plans in an audit and feedback
  - a. Makes no difference to the outcome
  - b. Makes it less effective
  - c. Makes it more effective
  - d. None of the above
4. Studies showed giving audit and feedback to professionals leads to
  - a. a vast improvement in practice
  - b. small but relevant changes in practice
  - c. improves only professionals and practices that is already performing above average
  - d. a and c
5. Disposing medical waste with municipal waste could

- a. Contaminate ground water
  - b. Expose people to preventable disease
  - c. Have a negative impact on the rates and taxes we pay
  - d. All of the above
6. As employed dental assistants and oral hygienists we are
- a. Not responsible for waste management
  - b. Obligated to ensure the practice has a responsible waste management policy
  - c. Obligated to report non-compliance to the waste management rules and regulations
  - d. B and c
7. As dental team members, we are not supposed to
- a. Minimise the amount of hazardous waste
  - b. Keep up to date with the latest scientific knowledge to minimise waste
  - c. Ensure medical waste gets burned
  - d. Separate all hazardous waste
8. Sharps containers should
- a. never be over-filled
  - b. Be kept upright
  - c. Visible and within reach of the practitioner
  - d. A and b
9. Infections are most commonly transmitted to waste handlers through
- a. trauma
  - b. blood borne materials
  - c. air borne organisms
  - d. neglect
10. Anatomical/ hazardous waste should be disposed in sealed a
- a. red bag
  - b. blue bag
  - c. orange bag
  - d. green or black bag
11. Discarded handpiece oil cans should be discarded in a sealed
- a. red bag
  - b. blue bag
  - c. orange bag
  - d. green or black bag
12. Kitchen waste from the practice should be discarded in a sealed
- a. red bag
  - b. blue bag
  - c. orange bag
  - d. green or black bag
13. Used office paper should be
- a. Treated as confidential documents
  - b. Recycled
  - c. Shredded
  - d. All of the above
14. Which statement does not apply to a dental practice?

And intermediate storage space should

- a. Be totally enclosed
  - b. Be separate from supply rooms or food preparation areas
  - c. Have lockable, domestic-type freezer unit
  - d. Have access restricted to authorised personnel only
15. Extracted teeth with amalgam fillings
- a. May be discarded in the red hazardous bag
  - b. Produce toxic fumes when incinerated
  - c. Has the potential to spread Hepatitis B
  - d. None of the above