

ENVIRONMENTAL ISSUES AND FUTURE SUSTAINABILITY ORIENTED POLICIES,

RELATED to DENTISTRY

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INTRODUCTION

Many disposables are produced during the daily activity of Dental offices and clinics. Some of them are classified as hazardous or contaminated materials - sharps, old dental materials, prosthetic restorations, plastics, foam, glass and, in general, a large quantity of disposables is generated, due to both clinical and laboratory as well as administrative performance of the dental offices. The European Council has held since 2014 a public orientation debate, on a legislative proposal amending six Directives addressing the management of various types of waste (11598/14). The aim of this proposal is to improve waste management in the European Union, with a view to protect the quality of the environment and ensuring prudent and rational use of natural resources.

European dentists welcome the initiative of the European Commission to stimulate Europe's transition towards a circular economy.

Turning waste into a resource and encourage recycling are fundamental to create an efficient market for secondary raw materials.

The safe management of waste has always been a concern for the dental profession. However, certain proposed measures will be very burdensome to micro, small and medium-sized enterprises (SMEs).

Dental waste categories

1. Single use materials (PPEs etc)
2. Tissues' residues
3. Dental biomaterials
4. Support materials
5. Packaging
6. Administrative waste
7. Beverages and consumables

MATERIALS AND METHODS

Dental waste materials

- Paper
- Glass
- Plastic
- Cellulose
- Metal
- Acrylic polymers
- Polyvinylsiloxane

- Polyether
- Latex
- Vinyl
- Nitrile
- Nylon
- Alginate
- Plaster etc.

RESULTS



The materials collected in the NKUA School of Dentistry were mainly polypropylene, polystyrene, polyethylene and packaging paper and the necessary procedures for cooperating with a recycling contractor have been started.

In one Academic semester and more precisely in 2019-2020, 99 packaging boxes 20x20x30cm with dental materials packaging, distribution and delivery materials were collected, of a gross weight 151,1 kgs and net weight of 129,32 kgs.

CONCLUSIONS



- Dentistry has to find alternatives to single-use plastic cups and other plastic single use items and it will depend on national legislation and market availability, what the most appropriate alternatives will be.
- Dental materials producers have to use recyclable delivery bottles or syringes and use less paper/ foam/nylon as packaging materials.
- In conclusion, Dental science has to encourage sustainable and environmentally friendly practices, use of materials and infrastructure in the dental clinics.

Purchase of ONE spraying or pumping apparatus per four or eight liters of product .
Also purchase Concentrated disinfection or sonication materials and produce your own diluted solution.

REFERENCES

Due to the donning and undressing requirements related to the COVID-19 and the additional materials used for semi-critical surfaces covering, the quantity of daily produced disposals has been tremendously increased (almost tripled). For that reason, new, special construction, color coded, and relatively labeled large disposal bins of 120 lt capacity have been additionally installed inside every clinic, for the easier collection and disposal of the DW of the School.