



Sustainable products in Dentistry

Group Clinical
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Introduction

Our health is affected by the environment in which we live, and the way in which we deliver modern healthcare impacts our environment through **emissions, pollution, and waste**. To meet the health needs of the present without compromising the health of **future generations**, we must embrace **sustainable healthcare** – the highest quality care, with the lowest possible environmental impact.



As part of Bupa's wider sustainability strategy, one of our ambitions is to identify **circular solutions for non-hazardous waste** across all our markets. To achieve this, we must reuse resources and minimise waste.

Single-use items are widely used in dentistry, and whilst many of these are vital for the safe and effective delivery of care, there is an opportunity to replace some single-use items with a more sustainable alternative.

The accompanying list contains a list of potential items that can be **switched to reusable** products and related information on the cleaning of those items.

Replacing certain items may not be appropriate or practical for every dental practice, so **choose the initiatives that are relevant** and feasible for your workplace. The 'suggested alternatives' are meant as examples – suppliers will vary country to country and this is just an example of what the alternative may look like/cost.

Some reusable items are more expensive than single use, but because they can be used many times, they are **often more cost effective** in the long-term.

Dr Anne Lepetit
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Did you know?

- Eliminating single-use items or switching to reusables where possible, alongside optimising decontamination processes and waste segregation and recycling, could reduce each product's **carbon footprint by 33%**.

Patient

Reusable alternative available	Suggested alternative/product example	Cleaning process	Supporting information
Patient bibs	<ul style="list-style-type: none"> • Wipe-down bibs 	Disinfection	Used in NHS care sector primarily. Wiped clean with a damp cloth or mild detergent.
Plastic cups	<ul style="list-style-type: none"> • Reusable metal cup 	Autoclavable	HTM 01-05 : No mention of need for single-use.

Staff

Reusable alternative available	Suggested alternative/product example	Cleaning process	Supporting information
Apron	<ul style="list-style-type: none"> • Reusable apron 	Laundered	Aprons can be wiped between patient contacts. They need to be laundered between days outside of decon or per use in decon. ¹
Face shield	<ul style="list-style-type: none"> • Reusable face shield 	Disinfection	HTM 01-05 : “Eye protection may be reusable... [continued].” ²
Surgical hats/caps	<ul style="list-style-type: none"> • Caps 	Laundered	Reusable textiles are recommended by the Royal College of Surgeons . ³

Equipment

Reusable alternative available	Suggested alternative/product example	Cleaning process	Supporting information
3-in-1 tips	<ul style="list-style-type: none"> • Reusable metal 3 in 1 syringe tips 	Autoclavable	HTM 01-05 , page 22: Type B ‘vacuum’ autoclaves are required to sterilise instruments with a tube/lumen.
All-in-one SUP matrix bands (metal matrix, plastic handle, e.g., Omni-matrix)	<ul style="list-style-type: none"> • Reusable Tofflemire holder and disposable metal matrix band • Reusable Sigveland holder and disposable metal matrix band 	Autoclave holder and dispose of band	Used widely prior to release of all-in-one SUP matrix bands. <i>Note: ensure staff are trained to insert and remove the matrix band.</i>
Dappens dish	<ul style="list-style-type: none"> • Reusable glass dappens dish • Silicone dappens dish 	Autoclavable	Bupa Dental Care UK are starting to use these in all practices.

Equipment continued

Reusable alternative available	Suggested alternative/ product example	Cleaning process	Supporting information
Disinfectant wipes	<ul style="list-style-type: none"> • Compostable towels and Dentaqua hypochlorous acid disinfectant solution (disinfectant spray bottle) 	Clinical waste	HTM 01-05 (6.61): “The patient treatment area should be cleaned after every session using disposable cloths or clean microfibre materials.”
High and low volume suction tips	<ul style="list-style-type: none"> • Surgical metal aspirator tips • Henry Schein: Aspirator tip autoclavable 	Autoclavable	Recommended by the American Dental Association. ⁴
Instrument trays	<ul style="list-style-type: none"> • Metal reusable instrument tray • Plastic reusable instrument tray with compartments 	Autoclavable	As recommended by the Royal College of Surgeons Intercollegiate Green Theatre Checklist .
Local anaesthetic (LA) syringe	<ul style="list-style-type: none"> • Reusable metal syringe 	Autoclavable	Metal used widely prior to plastic syringes and safety-plus needles. ⁵
Plastic single use impression trays	<ul style="list-style-type: none"> • Stainless steel impression trays 	Autoclavable	Used widely prior to plastic single use impression trays. ⁶
Plastic barrier wrap	<ul style="list-style-type: none"> • On easy to clean surfaces: wipe down chair only <ul style="list-style-type: none"> ◦ If barrier/sleeves must be used: biodegradable alternative 	Disinfection	For dental chairs , use a non-alcohol, nonchlorine, based wipe for plastic, metal, and upholstered surfaces. ⁷
Prophy heads	<ul style="list-style-type: none"> • Reusable prophy angles 	Autoclavable	Recommended by the American Dental Association .
Sharps bin	<ul style="list-style-type: none"> • SharpSmart 	Send back to supplier for cleaning	The SharpSmart system reduces sharps injuries by up to 87%. ⁸

Future opportunities

To the right is a list of items that are often disposable/single-use but have been identified as having potential to be reusable but as yet alternatives are not available, or no case studies have been found. If you are able, ask your supplier if they are able to procure reusable alternatives – ideally they would provide a lifecycle assessment for the reusable item, so we can verify that the reusable option is less impactful on the planet.

Reusable alternative not yet available, could you reduce instead?

- Reusable material Type II R masks
- X-ray sensor sleeve
- Reusable pouches
- Reusable matrix band
- Gloves alternative
- Barrier wrap
- Ultra safety-plus twist

References

Reusable alternative available	Additional information
¹ Apron	<p>The Revolution Zero apron is able to be decontaminated at least 75 times, is CE marked EN13795, is alcohol and water resistant, and the fabric is 99.4% polyester and 0.6% carbon that is optimised for repurposing or recycling at end of life.</p> <p>Aprons can be wiped between patient contacts. They need to be laundered between days outside of decon or per use in decon.</p>
² Face shield	<p>HTM 01-05: “Eye protection may be reusable but is often difficult to clean. It may be reused if cleaned according to manufacturers’ instructions. This should take place when it becomes visibly dirty and/or at the end of each session. Disposable visors are available and may be used.”</p> <p>All components of reusable face shields can be washed between uses and recycled at end of life & the shield piece is replaceable if damaged or dirtied.</p>
³ Surgical hats/ caps	<p>Multiple studies have demonstrated no difference in surgical site infections with disposable bouffant caps compared to traditional, reusable cloth caps. Reusable caps are also more cost efficient in the long run.</p>
⁴ High and low volume suction tips	<p>Metal used widely prior to plastic.</p> <p>Check if these would fit into the top of high volume tip or are to be used for separate aspirator tube.</p> <p>Recommended by the American Dental Association in the 80 ways to make your dental practice green report.</p> <p>Note: Type B ‘vacuum’ autoclaves are required to sterilise instruments with a tube/lumen. HTM 01-05: page 22</p>
⁵ Local anaesthetic (LA) syringe and Ultra safety-plus twist needle	<p>Acceptable practice to meet Essential Quality Requirements and the EU Directive.</p> <p>Note: CQC: “There should be a written practice policy/protocol in place, including a risk assessment explaining why you use traditional local anaesthetic reusable syringes.”</p>
⁶ Impression trays	<p>Practices will need instrument holder inserts in their plain metal trays: 28x18cm tray, 28x18cm tray cover, 28x18cm aluminium instrument holder. To go one step further, digital intraoral scanners such as iTero require no materials (such as impression trays) or transportation to labs.</p>
⁷ Plastic barrier wrap	<p>HTM 01-05 (6.61): “The patient treatment area should be cleaned after every session using disposable cloths or clean microfibre materials.”</p>
⁸ Sharps bin	<p>The SharpSmart system reduces sharps injuries by up to 87%, reduces sharps waste by 20%, and has a 33% environmental impact reduction compared to single-use plastic sharps bins.</p>