Sustainable Healthcare Induction Pack



Developed by Irish Doctors for the Environment



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Foreword



Welcome to the Irish Doctors for the Environment (IDE) Induction Pack. This document forms part of our vision and strategy for a more sustainable healthcare system. IDE is an NGO and registered charity consisting of doctors, medical students and allied healthcare professionals in Ireland who aim to create awareness, interest and implement action around environment health and the impact it has on our patients' health.

Climate change is the greatest public health threat of the 21st century. The health impacts of climate change are complex and include illness, death, and injury due to extreme temperatures and weather events, changes in infectious disease vectors, increases in water borne illnesses, and wide-ranging impacts from air pollution. The WHO estimates that climate change will cause approximately 250,000 additional deaths per year from malnutrition, malaria, diarrhoea, and heat stress between 2030 and 2050.

The healthcare sector must seize the opportunity to address its own contribution to climate change and the impact of climate change on public health. That means

reducing its own emissions to net zero and adapting now so our health

systems are prepared for the new pressures climate change will

inevitably create.

In this guide, we have focused on Sustainable Waste, Anaesthetic Gases, Active Travel, Sustainable Diets and Pharmaceutical Waste to educate and aid healthcare workers in Ireland make smarter changes in their workplace. By outlining what the scope of the problem is in our healthcare setting, why we need to address it and then how to make these changes, we aim to empower healthcare workers in Ireland to be a driving force of change.

We hope this document helps you understand your impact on the environment as a healthcare professional, as well as provide guidance on how to reduce that impact. By working together we can tackle the challenges we face more effectively and accelerate the process of positive change.

Dr Rachel MacCann Operations Officer, Irish Doctors for the Environment



Sustainability as a Healthcare Necessity



Covid-19 has impacted on every aspect of our society, yet climate change continues to be the greatest global health threat of our time.

The Lancet recognises the essential role of healthcare workers to communicate this threat and drive the necessary changes to safeguard human health.

The Intergovernmental Panel on Climate Change estimates that there will be 200 million persons displaced worldwide by 2050. Our actions today to mitigate carbon emissions can change this course.

If the health sector were a country, it would be the fifth-largest emitter on the planet, contributing 4.4% of net global emissions.

The Royal College of Physicians has recently expanded on the Institute of Medicine's six domains of quality to include sustainability. The impetus for this is twofold; both a practical and ethical view of healthcare.

Healthcare emissions consist of:

17%

Emissions arising from healthcare facilities

12%

In-direct emissions from purchased electricity

71%

Emissions arising healthcare supply chain such as pharmaceuticals, medical devices and equipment

Practically speaking, creating a sustainable healthcare system is a requirement due to increasingly difficult financial, social and environmental contexts. By reducing the resources required to deliver healthcare we can continue delivering healthcare to future generations. On an ethical level, the healthcare system should seek to minimise it's contribution to climate change and it's deleterious effects on the health of people worldwide.

The healthcare sector in every country should advocate for a rapid phase-out of fossil fuels and chart the course for zero-emissions health care by 2050.

Healthcare Waste



Key Points:

- 1. **Healthcare risk waste bins** must be used appropriately, reducing the cost and energy use of unnecessary waste disposal.
- 2. Over-reliance on **single use plastics** must be addressed by cutting down our unnecessary waste day-to-day and advocating for greener procurement practices.
- 3. **Food waste** can be prevented through communication with patients and between healthcare professionals.





5,400 tonnes of missed recycling per year [2]



Costs **€1,900 more**per tonne to

incinerate

healthcare risk waste [1]



Potential cost reductions of up to €1,300,000 [1]

Healthcare risk waste

Waste in hospitals is segregated into recyclables, waste. general healthcare risk waste (HCRW). However, this segregation is often done incorrectly, HSE's with the Green Healthcare Programme (GHCP) finding that a third of HCRW in acute hospitals in Ireland is non-contaminated and thus may be considered general or recyclable waste [1]. By ensuring that only HCRW is disposed of as such, between €800,000 and €1,300,000 can be saved nationally across Ireland [1]. Furthermore, the GHCP found that 32% of general waste in acute facilities was actually recyclable 2.

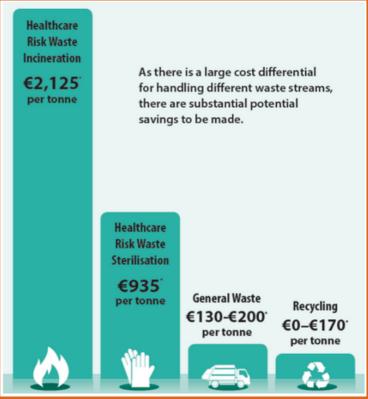


Image from greenhealthcare.ie

Healthcare Waste

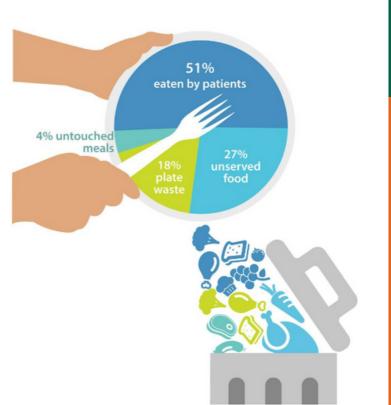




Single use plastics

Hospital waste contributes significantly to the well-being of the environment, with about 80% of products used, from PPE to sanitary products being single use. A European survey was conducted which showed that medical items purchased in the greatest volume were common across all project participants, with gloves being the largest single item by volume in all five hospitals [4]. Reducing the use and replacement of these products can have a huge impact on healthcare waste.





Food waste

Image from greenhealthcare.ie

In addition, Irish hospitals produce a significant amount of food waste, with the GHCP estimating that 37–49% of food served to patients is not eaten [3]. The GHCP has found that, on average, 0.73 kg of food is wasted per patient bed daily, which is worth approximately €2.50 [3]. This adds up to about €7.2 million per year across Irish acute facilities [3]. These cost savings translate directly into energy and other raw resource savings, which make savings such as these a win-win for the hospital and the environment.



ACTIONS FOR HEALTHCARE WORKERS

To achieve better action on healthcare waste, we need to take several key steps in our workplace, which include:

• Education

- Regular staff training is essential- your workplace waste officer will be able to provide you with training and access to useful resources
- Check the signage on your bins to see what should and shouldn't go in that bin

Appropriate use of bins (see our waste sorting guide in the appendix)

- Appropriate positioning of bins throughout the hospital/ healthcare setting
- Placing HCRW bins away from sources of general waste (such as a handwashing sink)
- Continuous monitoring and auditing of healthcare waste
- Where compostable alternatives used, request that a compostable bin must be provided in that staff area
- Green Procurement- ask your department head or line manager about procurement strategies, including
 - Reconsider the use of pre-made packs for healthcare procedures, which often contain unnecessary single-use plastics.
 - Consider Green Procurement options for eg no longer purchase PVC gloves, instead using nitrile gloves only
 - Request that your department no longer purchase single-use plastic cups, cutlery or straws in HSE facilities

Food waste reduction

- Allow patients to choose their meal times and sizes, enforcing protected meal times so as to reduce the number of distractions by visitors or other activities at this time.
- Check to see if the coffee shop in your hospital can donate coffee grounds for composting- one such programme was recently launched in St Vincent's Hospital, Dublin where you can take home some coffee grounds for free to use in your own garden.
- Training courses. The SEAI has several online training modules free to undertake online, such as "Energy and Climate Change", "Energy use in Labs" and "Ireland's Journey to Net Zero". https://www.seai.ie/energyacademy/

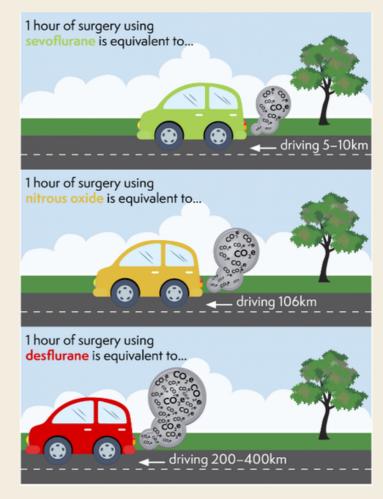


Angesthetic Gases

Key Points:

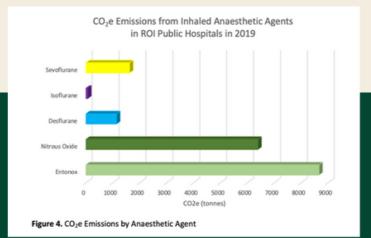
- 1. Audit IAG use.
- 2. Reduce desflurance and nitrous oxide use where possible.
- 3. Consider alternatives.

Inhalation anaesthetic gases (IAGs) are potent greenhouse gases (GHGs). These are considered to have disproportionately high effect on the environment for such a specific part of healthcare. lt is estimated anaesthetic gases are responsible for 5% of GHG emissions generated by acute hospitals in the UK [10]. Techniques for reducing this are well-documented and safe, so it is relatively easy to reduce emissions in this area.





Audit Irish Hospitals



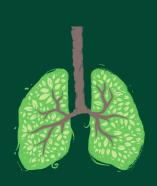
Tonnes of Co2 emitted from Irish Hospital anaesthetic gas use.

Of emissions are due to N20 use.

Desflurane accounts for 4% of gas use but 40% of CO2 emissions.

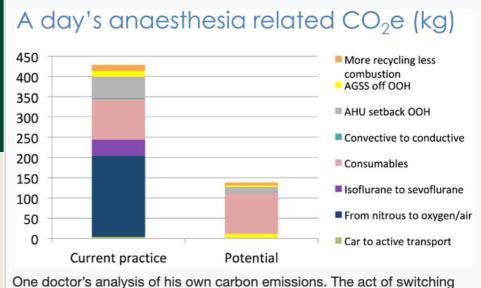
MA What can I do?

A good place to start is by <u>auditing</u> the usage of IAGs, so it can be determined whether policy changes are effective or not. Because of their use in healthcare, IAGs are not subject to international regulation and reporting, unlike other GHGs [10]. Therefore it is up to each country to measure and record how much IAGs they are using. The NHS already does this, but Ireland has yet to follow suit.



Usage of <u>desflurane</u> and <u>N2O</u> should be reduced with the highest priority. In most cases, sevoflurane and isoflurane can be used instead of desflurane—at lower concentrations and lower prices [11][12]. Regular air and a higher concentration of the main volatile IAG may be used to replace N2O [3]. The emissions from the increased use of the volatile IAG is much less than the emissions eliminated by the reduction of N2O [11].





from nitrous oxide alone almost cuts his emissions in half. [12]

N2O in the form of Entonox (a mixture of 50% N2O and 50% oxygen) is currently the best analgesic agent used during labour, and it is not as easy to replace. Nitrous oxide has a significant global warming potential at 19,000 g CO2e or 95 km travelled in an average car [9]. However, it is possible to capture the waste N2O when the patient breathes it out and "crack", or separate, it into nitrogen and oxygen, both of which are not harmful for the environment. Efforts to reduce Entonox use can be done by encouraging alternative coping techniques in early labour where possible, such as TENS / yoga ball / paracetamol and use of Labour Hopscotch Framework in maternity units.

"THE TRUE COST OF CLIMATE CHANGE IS FELT IN OUR HOSPITALS AND IN OUR LUNGS."



~ DR MARIA NEIRA, WHO DIRECTOR OF PUBLIC HEALTH, ENVIRONMENTAL AND SOCIAL DETERMINANTS OF HEALTH

The use of IAGs may be reduced by using other techniques as well. One technique is low-flow anaesthesia, which involves reducing the flow of the IAG down to 1.5 L/min at most [11]. Modern anaesthesia delivery systems can help achieve this by keeping the anaesthetist aware of how much gas they are using, also reducing costs [12]. Anaesthetists should also consider total intravenous anaesthesia (TIVA), central neuraxial blocks, and regional anaesthesia, which all eliminate the need for IAGs [11].



The ways an anaesthetist can reduce their carbon footprint goes beyond reducing IAGs. Equipment such as the anaesthetic gas scavenging system (AGSS, used to remove excess anaesthetic gases from the air of an operating room) and air handling unit (AHU) sometimes run all night. Shutting these off when not in use Has an impact on carbon emissions [12]. As with other aspects of healthcare, anaesthesia creates waste through single-use equipment and packaging, so the 5 R's (reduce, reuse, recycle, rethink, and research) should be used to reduce waste in this field [13].

Anaesthetists, along with other healthcare professionals, should also be encouraging their patients to make healthy and environmentally-friendly lifestyle choices. Healthy and adequately prepared patients do not need to undergo testing or be admitted to hospital the days before their operation, eliminating additional travel for the patient as well as increased waste from having them in hospital [14][15].



Pharmaceutical Waste & **Antimicrobial Resistance**



Key Points:

1. Counsel patients on the correct disposal of prescribed medications to avoid pharmaceutical pollution.

2. Remain vigilant to the threat of antimicrobial resistance.

A major source of pharmaceutical waste comes from the improper disposal of household medications. A survey done by Healthcare Without Harm Europe (HCWH) in London, 59% and 47% of respondents threw their unused solid and liquid medications in the general waste bin, respectively[16]. Respondents claimed they were likely to dispose of pharmaceutical waste at appropriate disposal locations if guidance and information had been previously provided; lack of information and lack of disposal locations being the main reasons respondents did not use appropriate disposal systems [16]. The improper medications contributes disposal of environmental damage, for example harm to aquatic life 17.

Although there is no formal programme for disposal of unused pharmaceuticals in Ireland, most pharmacies should accept unused and out of date medications. It is the responsibility of prescribing clinicians to provide this information and should be incorporated into regular practice in acute and community settings.



Snap Facts

700,000

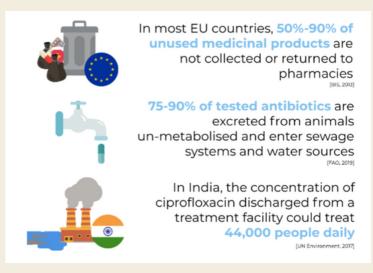
deaths worldwide caused by AMR.

59%

of patients threw unused solid medications in the general waste [16]. 1 in 3

patients admitted to acute care hospitals in Europe receive at least one antimicrobial agent.

Antimicrobial resistance (AMR) currently causes 700,000 deaths per year worldwide and is projected to cause 10 million deaths per year by 2050 [19]. 75% of drug-resistant bacteria are due to healthcare-associated infections of which 39% of this is due to bacteria resistant to last-line antibiotic use. [19, ECDC 2018]. If appropriate action is not taken, minor infections and routine surgeries could become life- threatening and the progress made with treating infectious



diseases over the last fifty years will be threatened[20]. The economic impact of this has already materialised in the US, with more than two million infections a year caused by drug-resistant bacteria to at least first-line antibiotic treatments[21]. This is resulting in excess costs of 20 billion USD each year for the US health system. The main drivers of AMR are antibiotic use in animals, humans and environmental pollution [18,] [19]. I in 3 patients admitted to acute care hospitals in Europe receives at least one antimicrobial agent [ECDC, 2015 from infographic]. It has been identified that up to 50% of human antimicrobial consumption globally may be inappropriate [CECD, 2016].



What can I do?

- Practice good antimicrobial stewardship. Reducing the demand for antimicrobials is key to tackling AMR. Reduction in the overuse of antibiotics is positively correlated with a reduction in antibiotic resistance [22].
- Practice good hand hygiene to reduce spread of infectious diseases and reduce spread of infectious diseases such as MRSA, clostridium difficile, VRE, CPE etc.
- Educate your patients on how and where to safely dispose of their medicationssuch as the inhaler recycling programme outlined below.
- Keep up to date with **prescribing guidelines** such as https://www.hse.ie/eng/services/list/2/gp/antibiotic-prescribing/
- Practice greener prescribing methods- such as inhaler prescribing choices outlined by our toolkit at the end of this document.
- Macro-level steps include engaging in **audits and research** in appropriate prescribing and increased investment in Infectious Disease Specialist Doctors.

INHALER PRESCRIBING



Irish Doctors for the Environment have developed a helpful pocket guide to green prescribing for inhaler devices. This guide was developed for all prescribing physicians and the MDT team to understand more about how our prescribing practices can impact healthcare's carbon footprint.

In Ireland, inhaled medications are estimated to account for 4% OF HEALTHCARE EMISSIONS reflecting our high usage of MDIs (60% of prescribed inhalers). Evidence has shown that by making simple changes to prescribing practice can make a big impact. In a GP practice in Ireland, reducing rates of MDI prescribing from 84% to 70% saved enough carbon to charge 3 million mobile phones over six months.

This <u>user-friendly guide</u> can help benefit both our patients and the environment and provides a decision aid for inhaler choices. This guide also has a toolkit on how to have a conversation with patients about MDI's to make these changes.

INHALER RECYCLING

Iln 2019, 4.4 million inhalers were dispensed to patients in Ireland and so TEVA, a pharmaceutical company established a **novel inhaler recycling campaign** at pharmacies throughout Ireland and more recently at St Vincent's University Hospital and the Mater Misericordiae Hospital in Dublin. The programme will allow the components of inhalers to be recycled into a range of product applications. (See Appendix on what inhaler products can and can't be recycled).

Follow the link below to see an interactive map to find out where your nearest inhaler recycling location is and let your patients know that there are safe and sustainable ways to dispose of their inhalers. https://www.teva.ie/patients/inhalerrecycling/

	INHALER TYPES	GLOBAL WARMING POTENTIAL	INSPIRATORY FLOW REQUIRED	PATIENT IS REQUIRED TO COORDINATE BREATH WITH ACTUATION	PHARYNGEAL DEPOSITION	AIRWAY DEPOSITION
Breath Actuated Metered Dose Inhaler (BAI)	EasibreatheAutohalerK-haler	High	Very Low	No	High	Low
Pressurised Metered Dose Inhaler	MDI Evohaler	High	Very Low	Yes	High	Low
pMDI plus Spacer		High	Very Low	No	Low	High
Dry Powder Inhaler	 Diskus Easyhaler Ellipta Turbohaler Spiromax Genuair Breezhaler Handihaler Zonda Aerolizer 	Low	Depends on device (See table)	No	Low	High
Soft Mist Inhaler	Respimat	Lower	Very Low 9	Yes	Low	High

Sustainable Diets



Key Points:

- 1. Our current diets contribute significantly to adverse health outcomes.
- 2. Sustainable diets are mutually beneficial to human health and the health of the planet.
- 3.Our guidelines must be updated to reflect the findings of the EAT Lancet report (2019).

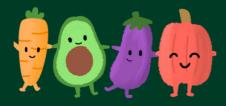
'Sustainable Diets are those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimising natural and human resources' [24]. This can be interpreted simply as dietary approaches and practices that have a low environmental impact whilst maintaining nutritional adequacy.

According to the UN Intergovernmental Panel on Climate Change (IPCC), in order to reach our goal of net-zero carbon, our global consumption of fruits, vegetables, nuts and legumes will have to double, and consumption of foods such as red meat, dairy and sugar will have to be reduced by more than 50%[24].



63%

Of Irish adults exceed their daily recommendation of dietary fat [25].



> 80%

Of Irish population are deficient in fibre [26].



Of Irish daily intake consists of fruit, veg, legumes and wholefoods [26].

The Irish Picture

In Irish hospitals, cardiovascular disease alone utilises on average 36% of acute hospital budgets. In Ireland, the overconsumption of animal products (in particular meat and full fat dairy) is a contributing factor to our cardiovascular profile [26]. If healthy and sustainable approaches lifestyle are practically implemented by the government, then the financial burden of diet and lifestylenon-communicable related diseases would be eased as well as the demand on the health service.

Dual-benefit

Shifting to a more plant-based diet can reduce dietary emissions by up to 73% [23], and has co-benefits to human health. with reduced intake a saturated fat, cholesterol, carcinogens, increased of intake phytonutrients and antioxidants (vitamin C and vitamin E which are only found in plants). Following a healthy plant-based lifestyle has been shown to prevent 30% of cancers and 80% of heart disease and type 2 diabetes (HSE, heal programme [27]).



Figure from BDA guidelines, One Blue Dot [29]

The EAT Lancet report (2019) shows that a healthy sustainable diet can be achieved whether one continues to consume meat and dairy (be at reduced quantities) or whether one follows a vegan / vegetarian diet. The National Healthy Eating guidelines used by the Irish Healthcare system need to change to reflect these changing dietary needs.

Redefining our National Dietary guidelines

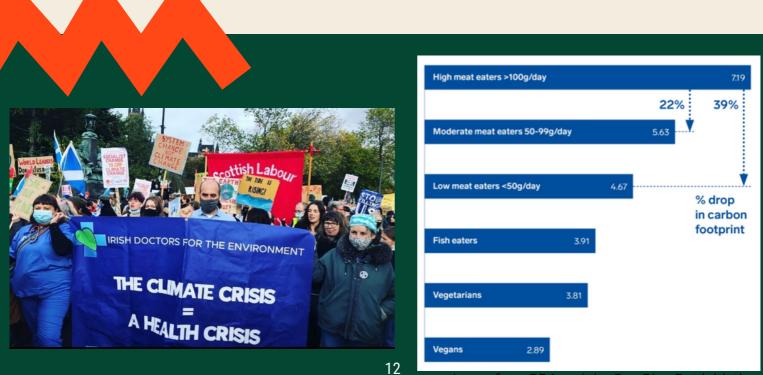
- 1.Over half our intake to be based on fruit and vegetables – with recommendations of 300-900g per day – in line with the Eatwell guide.
- 2. Prioritise wholegrains over tubers and starchy vegetables: starchy vegetables are highly limited to no more than 100g per day.
- 3.Dairy foods are reduced from 0-500ml of low fat milk per day the upper range is similar to the Eatwell guide
- 4. Sugars recommended at no more than 31g per adult per day



What can I do?



- Irish healthcare providers need to educate and increase awareness to our patients and the public about the dual benefits of a healthy and sustainable diet. Set realistic goals with patients to gradually add some meat-free days to their week.
- Irish Doctors for the Environment have developed a plant-based recipe booklet containing healthy recipes to encourage the public and HCP to find tasty and nutritious ways to eat more plant-based and sustainable meals.
- Call for government action on **national dietary guidelines** to be updated to reflect the need for sustainable, healthy dietary choices
- Advocate for increased sustainable procurement of food in healthcare facilities, and reduced food waste.
- Advocate for an increased accessibility and promotion of sustainable, healthy food in healthcare facilities (fruit, vegetables, wholegrains, legumes (beans, peas, lentils), unsalted nuts and seeds).
- Help to increase awareness and understanding among consumers and health professionals of the latest scientific research surrounding sustainable, healthy dietary practices.
- Lobby policy makers, partake in consultations and submissions to advocate for the necessary implementation of sufficient sustainable policies when it comes to promotion of food and recommended dietary practices.



Active Travel



Key Points:

- 1. Active travel is a economical and sustainable way to boost your physical and mental health.
- 2. Active travel addresses problems related to air quality and obesity.
- 3. Encourage your colleagues and patients to look for ways they can incorporate active travel into their lives.

Active travel is travelling using your own energy, i.e walking or cycling as opposed to using a car or bus. Active travel has many potential benefits including health, environmental and economic.

The National Institute of Clinical Excellence (NICE) recommends that employers develop policies to encourage employees to walk, cycle or use other modes of transport involving physical activity to travel to and from work as part of their working day.

Physical Benefits

Starting a new job can be a busy and tiring time and you might find it difficult to stay as active as you would like. Incorporating physical activity into your daily routine via walking or cycling can help keep your mind and body healthy. Research suggests that those who actively commute to work are more likely to meet the WHO physical activity guidelines – a 15 minute cycle to work and back each working day will see you hit the goal! A recent long term health study done in the Dublin Metropolitan Area reported the prevention of 2,731 serious long-term health conditions annually for those who travel actively.











Current levels of cycling in Dublin prevent

42 premature deaths and save 82,000 GP appointments.

Environmental Benefits

Environmental Benefits- Transport now accounts for 20% of the Republic of Ireland's greenhouse gas emissions, of which 94% was road traffic. Current levels of active save saves the equivalent to the carbon footprint of 340,000 people taking flights from Dublin to London Heathrow. In order to help meet the 51% reduction in emissions targeted for 2030, an additional 500,000 active travel and public transport journeys are needed.

Air Quality

Air quality benefits- More people walking and cycling means cleaner, safer air for all of us. Poor air quality is responsible for an estimated 1,300 premature deaths in Ireland yearly (EPA 2021). Traffic is one of the main air polluters, with significant reductions in NO2 seen when traffic volumes reduced during the COVID-19 pandemic.





Using the Bike to Work scheme, your employer can help you obtain a brand new bike and safety equipment worth up to €1,250 for a regular bike, and up to €1,500 for an electric bike. The scheme covers your new bike and gear, so you can save up to 52% of the retail price of bike and equipment. To find out more, contact your local HR department and see further information at https://www.biketowork.ie/#how-it-works







Actions For Healthcare Workers:

Healthcare waste

- See Appendix for our waste sorting guide, and advocate for proper placement and use of bins to reduce the burden of inappropriate waste disposal.
- Be conscious of food waste and work with your team to prevent it. Empower patients to control their portions.
- Cease unnecesary use of single-use plastics and advocate for greener procurement practices.

Anaesthetic Gases

- Audit inhaled anaesthetic gas use and consider alternatives.
- Reduce desflurance and nitrous oxide use where possible.

Pharmaceutical Waste and AMR

- Counsel patients on the correct disposal of prescribed medications to avoid pharmaceutical pollution.
- Remain vigilant to the threat of antimicrobial resistance. Follow prescribing guidelines and audit antimicrobial use.

Inhaler Prescribing

• See our guides (appendix) on sustainable inhaler prescribing and recycling, and direct patients to these resources.

Sustainable Diets

- Educate and increase awareness to our patients and the public about the dual benefits of a healthy and sustainable diet. Set realistic goals with patients to gradually add meat-free days to their week.
- Call for government action on national dietary guidelines to be updated to reflect the need for sustainable, healthy dietary choices.

Active Travel

• Encourage your colleagues and patients to look for ways they can incorporate active travel into their lives, such as the Bike to Work Scheme.

Appendix

Waste Sorting Guide

 General Waste, including: Incontinence wear Gloves Dirty or non-recyclable packaging Disposable aprons and gowns Face masks, shoe covers, and hats Cleaning cloth 	\Box	White Bin
Recyclables, including: Clean plastic packaging Plastic film Clean plastic cups and bottles Newspapers, magazines, and non-confidential papers Flattened cardboard boxes and trays Clean aluminium		Green Bin
Food Waste, including: Plate waste Teabags Peelings, bones, and other unavoidable food waste Out-of-date food (no packaging) Tissues (not wet) Compostable coffee cups No plastics!	$\langle \rangle$	Brown Bin
Only for documents with confidential details or information Not for newspapers, magazines, or anything that is already available to the public. Very expensive to process!	\Box	Confidential Waste Console



Soft Healthcare Risk Waste, including: Items contaminated with blood Items contaminated with body fluids other than faeces, urine or breast milk (these go in general waste) Contaminated waste from patients with transmissible infectious diseases Incontinence wear from patients with known enteric pathogens No sharps, free liquids, or hard objects! These containers may go in the yellow wheelie bins.		Yellow Bin/Bag
Healthcare Risk Waste, including:		Yellow Lidded Container
Typical Contaminated Sharps, including: Needles Syringes IV giving sets No free liquids, cytotoxic waste, or heavy metals! These containers may go in the yellow wheelie bins.		Blue/Orange Sharps Container
Oytotoxic Waste Non sharps cytotoxic waste Pharmaceuticals No sharps or free liquids!	$\begin{array}{c} \\ \\ \\ \end{array}$	Purple Lidded Container
Cytotoxic Sharps	\triangle	Purple Sharps Container
Metals and Recognizable Anatomical Waste Single-use metal instruments Placentas Non-autoclaved and microbiological cultures No sharps or free liquids!	\Box	Black Lidded Container

THANKS FOR READING TO THE END! THIS DOCUMENT WAS PRODUCED BY IRISH DOCTORS FOR THE ENVIRONMENT. IF YOU WOULD LIKE TO LEARN MORE ABOUT IDE, PLEASE VISIT OUR WEBSITE, LOOK THROUGH OUR WELCOME PACK, OR SIGN UP FOR OUR NEWSLETTER. ALSO FIND US ON TWITTER AND INSTAGRAM.

WE WOULD LIKE TO ACKNOWLEDGE THE WORK OF THE AUTHORS AND THOSE WHO **CONTRIBUTED TO THIS GUIDE:**

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