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RPS GREENER PHARMACY GUIDE

To be used in conjunction with the RPS Greener Pharmacy Toolkit

For Hospital Pharmacies
(Simplified version)

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Introduction

The Royal Pharmaceutical Society (RPS) Greener Pharmacy Guide has been developed to raise awareness and capability of pharmacy staff to reduce the environmental impacts of the pharmacy sector. The scoping review underpinning the development of the guide will be published on the RPS website. This guide supports the rollout of the RPS Greener Pharmacy Toolkit, which hospital pharmacies can use to self-accredit their sustainability status. The guide sets out actions that pharmacy staff and pharmacy settings can achieve to help the NHS meet its net zero targets.

The actions outlined within the guide and toolkit may be embedded into existing policy levers and contracts where appropriate by various NHS stakeholders. The actions listed in the guide and toolkit have been mapped to achieve the United Nations Sustainable Development goals. Hospital pharmacies can use the guide and toolkit to collect data for certain actions mandated by their Trust's Green Plan set out in the 2021/22 NHS Standard Contract. A net zero pharmacy may improve the organisation's reputation and comply with statutory requirements to decarbonise the healthcare sector.

The guide was developed using RPS processes. The guide's development was led by healthcare professionals with expertise in environmental sustainability with multi-stakeholder engagement and feedback.

Purpose

The guide outlines key actions to reduce the carbon hotspots of pharmacy services and help pharmacy staff to self-accredit pharmacy settings on their sustainability status using the toolkit. The guide allows all pharmacy staff and settings to:

- Have the knowledge and capability to understand the environmental impacts of healthcare, medicines and pharmacy practice.
- Reduce the environmental impacts of healthcare, medicines and pharmacy practice to meet the NHS's net zero commitment.
- Certify their sustainability credentials of pharmacy settings to show how they are reducing their environmental impacts.
- Estimate the impact of actions taken in the toolkit to allow for quantification of carbon savings.
- Raise awareness to patients and the wider public of the environmental impact of healthcare, medicines and pharmacy practice and the interdependency with health.

Scope

The guide mainly covers NHS hospital pharmacy services, whether provided internally or outsourced, and are applicable across the full range of service providers in the NHS and independent sector. They may be applicable in across other services:

- Hospitals (acute and non-acute)
- Mental health
- Community services
- Prison
- Hospice
- Ambulance settings

RPS Greener Pharmacy Guide

The guide contain six overarching domains:

- 1. People**
- 2. Clinical Practice**
- 3. Travel**
- 4. Resource Use**
- 5. Information and communications technology (ICT)**
- 6. Operations and strategies**

This guide is less focused on clinical pharmacy practice and more about empowering pharmacy staff and decarbonising pharmacy settings. Each domain lists various co-benefits of the actions on the toolkit which are appealing to the pharmacy sector such as time saving, cost saving, improving health and wellbeing of patients and staff as well as waste reduction.

Using the guide

There are three levels under each domain with actions at each tier that pharmacy staff and settings can accomplish to progress towards the target goals associated with each level. Using the toolkit on the web platform, this guide can help hospital pharmacies work consistently towards decarbonisation and display their accreditation publicly to show their progress towards a net zero pharmacy. It is recommended that the actions listed in the guide and toolkit are shared between as many pharmacy staff possible to complete according to timelines set by the task group.

Level	Action	Target achievement
1	Easy, few actions, low data input	100%
2	Moderate, more actions, more data input	70%
3	Hard, few actions, high data input	50%

Associated resources on the RPS website provide links to legal and regulatory frameworks, international standards, core standards required by systems regulators, as well as signposting to more detailed guidance, resources and support tools. Individuals and organisations are encouraged to submit examples of good practice to RPS as well as further feedback on the guide (support@rpharms.com).

Domain 1: People

All staff in the healthcare system play a crucial role in helping the NHS meet its net zero ambitions. They directly influence the healthcare emissions, can educate colleagues, patients and the wider public about environmental sustainability, help innovate technologies to address inefficient practices and become role models for others to follow. Their collective efforts help mitigate the impacts of climate change and promote a healthier sustainable future for all.

Outcome: The listed actions in this domain ensures the whole pharmacy team is informed and aware of the potential impacts of climate change and are equipped with knowledge and skills to implement sustainable changes in their professional and personal lives. This can also result in cost savings, promotion of good health, and sharing of good practice to improve pharmacy services.

Level 1:

Pharmacy staff regularly engage patients and their carers in conversations and initiatives related to disease prevention and environmental health.	
Pharmacy staff have undertaken a continuous professional development (planned or unplanned), peer discussion or reflective record relating to environmental sustainable healthcare.	

Level 2:

Pharmacies have included environmental sustainability and net zero objectives in all pharmacy job descriptions, job adverts, induction, interviews, governance and culture.	
Pharmacy staff have joined a greener pharmacy network.	
Pharmacy staff have read the RPS Sustainability Policies and openly pledged a sustainable action in the RPS Climate Change Charter which is displayed in their pharmacy settings or on their social media accounts..	
Pharmacy staff are kept up to date with the latest healthcare environmental sustainability news.	
Pharmacy staff have organised workplace social events that promote the environment.	
Pharmacy staff have participated in environmental campaigns to raise awareness.	

Level 3:

Pharmacy staff have participated in a SusQI project.	
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Pharmacy staff have organised local, regional or national teaching, webinars or conferences to raise awareness of sustainable healthcare.	
Sustainable healthcare has been embedded into existing pharmacy training programmes within the department.	
Pharmacy staff have applied for or collaborated with local organisations to secure funding for environmental sustainability research projects or pilot studies.	

Domain 2: Clinical Practice

Medicines account for 25% of the NHS's carbon footprint in England (2% from anaesthetic gases and 3% from inhalers) and the unintended wider ecological impacts of medicines use should be mitigated where possible.

Outcome: The listed actions introduce measures pharmacy staff can take to reduce the environmental impacts of clinical pharmacy practices and pharmaceuticals through shared-decision making and personalised care. It can present cost savings, improve patient outcomes, reduce unnecessary waste and increase pharmacy productivity.

Level 1:

Raise awareness among all healthcare staff and inform patients to avoid pouring any pharmaceuticals or chemicals down sinks, toilets or drains. Enforce messaging of returning all unused or unwanted medications to local pharmacies for disposal.	
Routinely ask patients to check their medications in pharmacy bags before leaving the pharmacy to prevent return of incorrect or unwanted items.	
Pharmacy settings have displayed environmental sustainability messaging (e.g., RPS Greener Pharmacy accreditation certificate, posters or leaflets) visible to patients and wider staff members to raise awareness.	

Level 2:

Encourage patients to bring their medications from home into hospitals.	
Use patient's medications from home during hospital stay.	
Promote timely intravenous to oral medication switch.	
Pharmacy staff are able to optimise respiratory care to reduce carbon footprint related to inhalers and improve respiratory disease outcomes.	
Pharmacy staff clearly and promptly communicates any changes of patient's medications on their discharge to primary care staff.	
Pharmacy staff can signpost to vegan-friendly medication options.	

Optimise access to virtual wards or outpatient parenteral antimicrobial treatment (OPAT) services to support low carbon care pathways and care closer to home for patients with infections and other complex care needs.	
Pharmacy staff are able to teach patients how to swallow solid drug formulations.	
Pharmacy staff knows how to signpost patients to health and wellbeing coaches, social prescribers or link workers through their GP practices for a range of local, non-clinical services.	
Pharmacy staff are aware of Trust policy on when to wear personal protective equipment (PPE) for pharmacy clinical service provision.	
Stocking smaller packaged medicines in clinical settings (e.g., vials or prefilled syringes) that reflect clinical usage patterns can reduce pharmaceutical waste.	

Level 3:

Eliminate desflurane use.	
Pharmacy staff are represented on Medical Gas Committee work to mitigate nitrous oxide (N ₂ O) waste.	
Pharmacy pursues a low-carbon drug formulary and inventory.	
Enrol pharmacy settings in available recycling schemes.	
Audit the amount of unused or expired medicines.	
Optimise multi-compartment compliance aids (MCAs) sizes to reduce plastic use.	

Domain 3: Travel

Road travel from patients, visitors, staff and NHS suppliers account for 14% of the healthcare system's total emissions in England. The use of technology can foster networking opportunities in larger geographical areas, reduce unnecessary travel delays or disruptions that risk business continuity or exposure to health-related concerns, e.g., disease outbreak.

Outcome: This domain introduces measures pharmacy teams can take to promote active travel and reduce unnecessary business travel that saves both time and costs. It promotes cleaner air for all and improves physical and mental health for staff and patients.

Level 1:

Pharmacy staff promotes active travel.	
Pharmacy staff utilises virtual meeting platforms to conduct meetings or educational events remotely, where possible, to reduce unnecessary travel.	
Pharmacy staff actively supports patients in navigating through the complex health and social care systems and overcoming barriers to access healthcare services.	

Level 2:

Availability of greener and active travel amenities in pharmacy settings are widely promoted to patients and visitors to encourage low carbon travel.	
Pharmacy staff are supported to work from home.	
Pharmacy has policy in place to support sustainable travel of pharmacy staff.	
Switch to greener fleet.	

Level 3:

Conduct an audit of pharmacy staff travel.	
Conduct an audit of patient travel.	
Conduct an audit to optimise pharmacy business travel routes.	
Offer remote consultations where appropriate, allowing patients to consult pharmacists remotely without the need to travel.	

Domain 4: Resource Use**4.1. Energy and water**

Energy production and consumption are the largest sources of global greenhouse gas emissions. Combustion of fossil fuels also emits air pollutants exacerbating the issues of global air pollution which is harmful to health. Purifying, storing, heating and supplying of water to pharmacy settings followed by sewage processing is energy-intensive and attached with large CO₂e.

Outcome: This sub-domain introduces measures which pharmacy teams and settings can take to improve energy efficiency. This will reduce running costs for pharmacy settings, create a favourable working environment (neither overheated nor overcooled), and support people who might be sensitive to temperature changes (e.g., hypothyroidism, menopause). Actions in this sub-domain also promote water conservation, reduce water consumption and prevent pharmaceutical pollution of water sewage systems.

Level 1:

Pharmacy staff keeps radiators free from obstruction and turn off air conditioning if window(s) or door(s) are open.	
Ensure all controls and switches in pharmacy settings are clearly labelled.	
Pharmacies optimise fridge or freezer spaces without overloading them and reduce the number of unnecessary fridges or freezers running in the department.	

Level 2:

Pharmacy staff knows how to report leaks or water waste promptly.	
Pharmacy staff manually switches off or sets a timer for all heating, cooling and electrical devices in pharmacy settings to match operating hours.	
Ensure responsible Trust staff are inspecting and maintaining the heating, ventilation and air conditioning (HVAC) systems, boilers and electrical items in pharmacy settings.	
Ensure all windows and doors in pharmacy settings are inspected and maintained, and doors in pharmacy settings are draught-proofed to prevent heat escaping.	
Switch all lighting in pharmacy settings to light-emitting diode (LED) bulbs.	
Install motion sensor or timer-controlled lights in low-use areas.	
Install tap flow restrictors in pharmacy settings.	

4.2. Waste and recycling

To address the environmental issues associated with healthcare waste, it is crucial to implement proper waste segregation, collection, treatment, and disposal practices in healthcare facilities. Appropriate waste segregation has been a legal requirement since 2005 and, therefore, enforceable by the Environment Agency.

Outcome: This actions in this sub-domain ensure pharmacy teams follow the waste hierarchy – eliminate, reduce, reuse, recycle or recover and dispose. This presents opportunities for cost savings, safer working practices and time saved handling waste.

Level 1:

Multiple bins for different waste streams are available in pharmacy settings and all bins are appropriately labelled for waste segregation.	
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Level 2:

Recycle or refill printer cartridges.	
Reduce and recycle paper.	
Eliminate avoidable single-use plastic.	
Install mains-fed water coolers instead of bottle-fed water coolers in pharmacy settings.	
Upcycle or recycle any existing furniture or equipment in pharmacy.	
Use electronics with rechargeable batteries and avoid single-use ones.	

Level 3:

Implement quality-assured systems to reuse sharps and cytotoxic bins.	
Although time consuming, conduct a waste audit to quantify the amount and types of waste from pharmacy settings and subsequently set a target for reduction of carbon hotspots.	

4.3. Procurement and Supply Chain

With a global focus on sustainability, suppliers that do not have net zero ambitions or carbon reduction plans may face reputational risks and market disadvantages.

Outcome: This domain introduces measures pharmacy teams can take to procure items sustainably. This can result in cost savings where businesses may be exempt from some taxes when purchasing energy-efficient technologies. It can also reduce extraction of natural resources, promote health and optimise treatments for patients.

Level 1:

Use recycled paper trademarked by the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC).	
Pharmacy staff encourages patients to adopt a meat-free and plant-forward diet, which prevents and treats chronic diseases, as well as supports planetary health.	

Level 2:

Pharmacy staff purchases Fairtrade -certified tea, coffee and sugar for communal break rooms or displayed a poster explaining the benefits of buying Fairtrade.	
Pharmacy staff are encouraged to bring their own lunch to work and avoid buying plastic-packaged food or be limited to food choices on sale that are not sustainable.	

Domain 5: Information and communications technology (ICT)

ICT infrastructure including data centres, servers, and network equipment consumes a significant amount of energy that generates greenhouse gas emissions to sustain ICT operations. Technological advancement also leads to generation of e-waste which can lead to environmental contamination and health risks. Climate change can disrupt ICT infrastructure through extreme weather events which affects delivery of patient care.

Outcome: This domain introduces measures pharmacy teams can take in their professional and personal lives to minimise the negative impact of ICT operations on the

environment. It also suggests how digital technologies can be utilised to provide cost and time savings, improve operational and pharmacy staff efficiency.

Level 1:

Pharmacy settings have contingency plans for ICT infrastructure failure.	
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Level 2:

Pharmacy staff reviews, deletes or avoids sending unnecessary emails and unsubscribed from unwelcomed electronic newsletters and marketing mailing lists.	
Pharmacy utilises digital apps or software to create and update pharmacy staff departmental rota without paper copies.	
Set the default search engine on all computers in pharmacy settings to Ecosia .	
Delete unwanted files as they are stored in data processing centres with high-energy carbon footprints, including any files stored in the cloud or Microsoft OneDrive.	
Keep equipment free from obstructions and clean filters and fans to prevent overheating and possible failure, especially during heatwaves.	
Regularly update the pharmacy department's distribution lists to cascade information to those who need them as this is also an information governance issue.	
Pharmacy staff aims to meet the NHS's ambition to eliminate paper at the point of care and support its digital evolution.	
Implement circular devicing.	

Level 3:

Invest in ICT infrastructure in pharmacy settings.	
Utilise digital technologies, such as automated dispensing machines, to track and manage drug inventory levels, ensure optimal stock rotation and reduce the likelihood of medicine waste. Review reasons for overstocking and near-expiry checking practices.	

Domain 6: Operations and strategy

Pharmacies should incorporate environmental sustainability into pharmacy staff's workplan, strategic and operating plans and budgets to reflect its commitment to net zero. It supports the UK's transition to a greener economy by creating green jobs and upskilling pharmacy staff in quality improvement work.

Outcome: This domain puts policies and strategies in pharmacies to help the NHS achieve net zero and enhance community resilience to the impacts of climate change.

When a pharmacy setting is clean, safe, caring and innovative, it also improves staff retention, morale and productivity.

Level 1:

Pharmacy has nominated a sustainability lead and recognises sustainability champions in pharmacy settings.	
Pharmacy staff are educated on their role and involved in achieving their Trusts' green plans collectively.	

Level 2:

Environment sustainability is a standing agenda item for every pharmacy team meeting.	
Pharmacy staff have joined or started a multidisciplinary sustainability task force in secondary care to take action towards sustainable healthcare.	
Pharmacy staff working towards net zero are allowed time off from clinical work to perform these activities.	

Level 3:

Where possible, utilise marketplaces and redistribution platforms for unused medicines close to their expiry date, which also provide better matching of supply and demand.	
Develop a climate change mitigation and adaptation plan for pharmacy.	
Create green spaces in pharmacy settings.	

Appendix 1

Pharmacy travel audit

A. For pharmacy staff and patient travel audits

Pharmacy's post code:

1. From which post code did you travel to our pharmacy today?

or How many miles in total did you travel to our pharmacy today?

Staff working in multiple sites or irregular, hybrid working patterns:

1. On average, how many days per week do you travel to work?

2. If you work on different sites regularly, please enter the post code of all the other sites, and how many days per week you travel to them:

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2. What is the mode of transport you used to travel to our pharmacy today?

- Walking
- Cycling
- Motorbike
 - **Size of motorbike:** Small Medium Large Average
- Car
 - **Size of car:** Small Medium Large Average
 - **Fuel:** Diesel Petrol Hybrid Plug-in hybrid electric Battery electric Compressed natural gas (CNG) Liquefied petroleum gas (LPG)
 - **Did you car-share with anyone?** Yes (How many in a car? ____) No
- Train
- Bus

Days	Total miles travelled (miles/km)	Purpose
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		