

PWYLLGOR ADNODDAU CYNALIADWY SUSTAINABLE RESOURCES COMMITTEE

DYDDIAD Y CYFARFOD: DATE OF MEETING:	28 February 2023
TEITL YR ADRODDIAD: TITLE OF REPORT:	Decarbonisation of Inhalers
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Jill Paterson Director of Primary Care, Community and Long Term Care
SWYDDOG ADRODD: REPORTING OFFICER:	Jenny Pugh-Jones Clinical Director of Pharmacy and Medicines Management

**Pwrpas yr Adroddiad (dewiswch fel yn addas)
Purpose of the Report (select as appropriate)**

Er Sicrwydd/For Assurance

ADRODDIAD SCAA SBAR REPORT

Sefyllfa / Situation

The NHS Wales Decarbonisation Strategic Delivery Plan has an aim of achieving net zero carbon emissions by 2030. Targeting the use of Metered Dose Inhalers (MDI) is a key element of achieving this target.

Hywel Dda University Health Board (HDdUHB) currently has one of the highest percentages of Dry-Powder Inhalers (DPIs) and Soft-Mist Inhalers (SMIs) as a percentage of all inhalers prescribed compared to other Health Boards (37% as of Q2 22-23). Despite this, significant improvement is required to meet the 80% target set by Welsh Government by 2025.

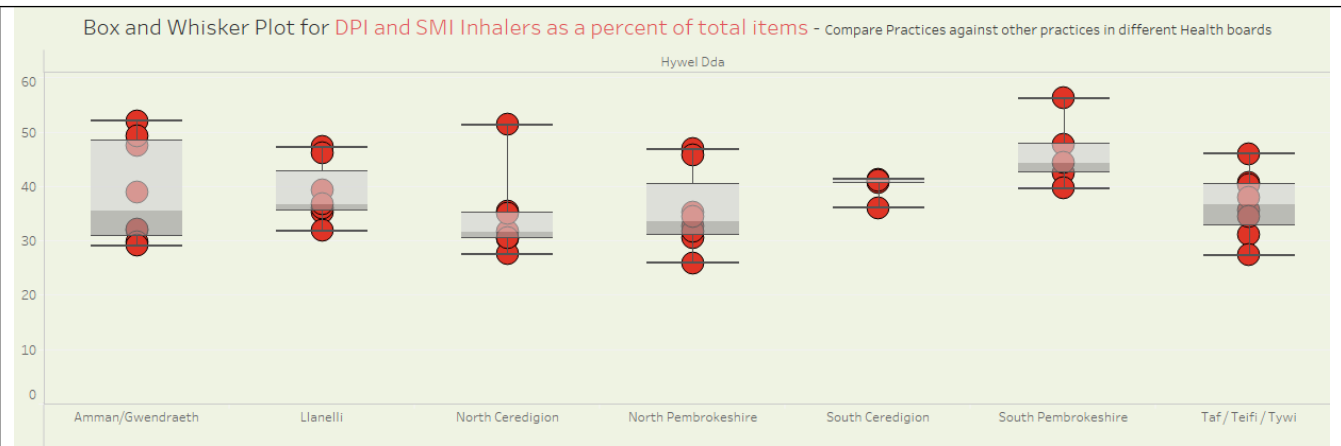
Due to the higher unit cost price of the preferred choice of inhalers, concerns have been raised with regards to the ability of the Health Board to progress this target due to current financial pressures.

This paper outlines the strategy in place within the Health Board (HB) to aim to achieve this ambitious target, balancing both financial and clinical targets, and to provide assurance that progress is being made since implementation of the plan.

Cefndir / Background

Pharmaceuticals are the second highest contributing factor towards the NHS carbon footprint, and the largest contributor in General Practice, with medicines accounting for 25% of emissions within the NHS. Almost 4% of this 25% is attributed to Metered Dose Inhalers (MDIs), which contain powerful greenhouse gases (hydrofluorocarbons). A key action within the Delivery Plan is to transition appropriate patients to low Global Warming Potential (GWP) inhalers, such as DPIs, which have a carbon footprint 18 times lower than MDIs. WG has set a target of 80% of inhalers being low GWP alternatives by 2025 and included this within the All Wales Medicines Strategy Group's (AWMSG) National Prescribing Indicators (NPIs) for 2022-23. To help to achieve this target, HDdUHB has set a target to increase DPI use to 75% or more by December 2024.

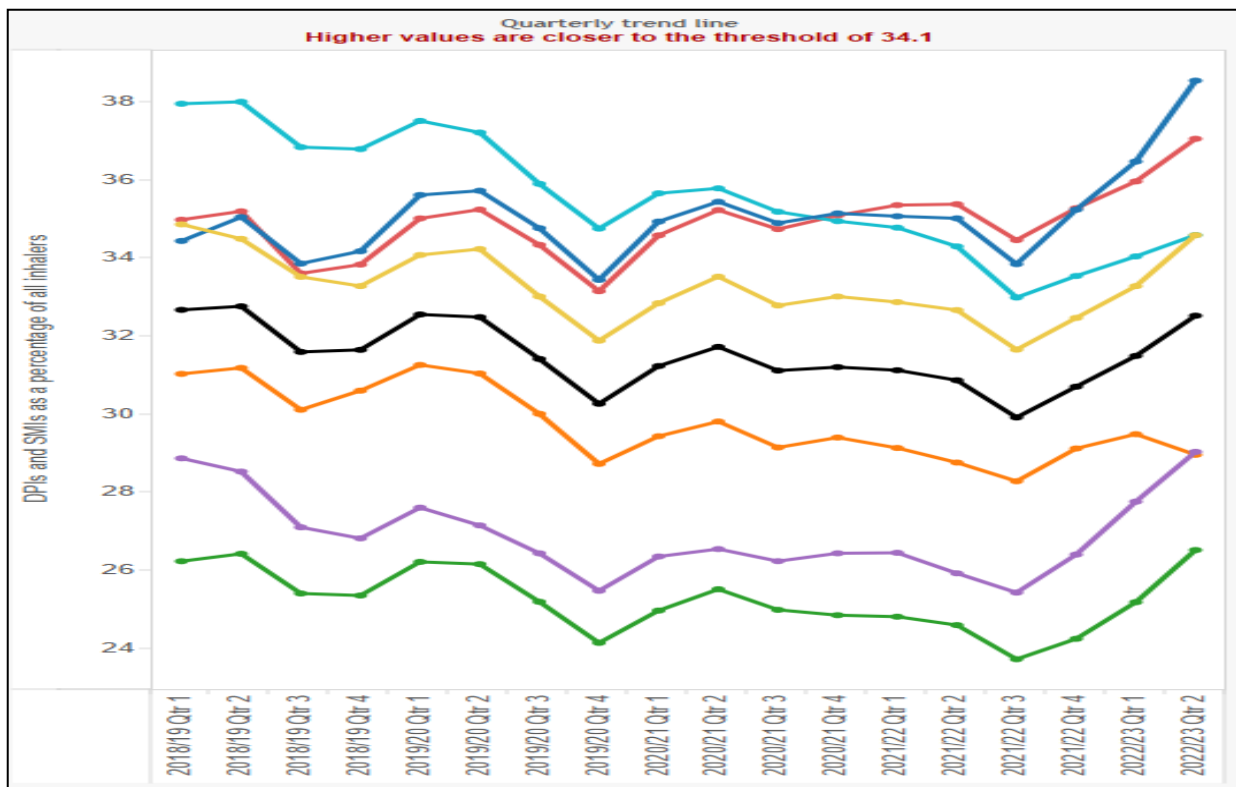
Despite being one of the highest prescribing Health Boards in Wales, there is still significant variation across practices and clusters, with areas for improvement across all areas.



Picture 1: Box and whisker plot for DPI and SMI inhalers as percentage of all inhalers across all practices and clusters in Hywel Dda.

Asesiad / Assessment

Hywel Dda UHB is currently achieving around 37% usage of DPI & SMI as percentage of all inhalers, with a gradual increase since last year.



Picture 2: Trend line analysis comparison of NHS Wales Health Boards for the National Prescribing Indicator. (Hywel Dda is in red)

Medicines Management teams across primary and secondary care, as part of the wider HB’s decarbonisation group, have identified targeted work programmes, aligned to value based healthcare, to support practices and the HB to work towards achieving the targets. Learning from other Health Boards across Wales is shared frequently through networks to ensure that the Health Board maximises opportunities as appropriate.

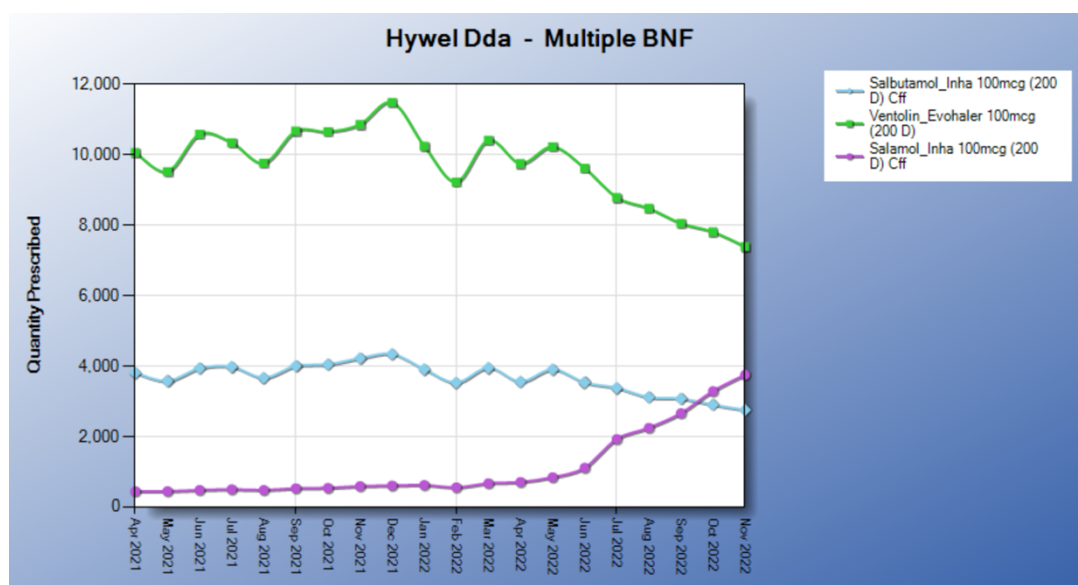
Salbutamol Prescribing

Current data demonstrates that Ventolin® Evohaler or generic Salbutamol inhaler MDIs are by far the most prescribed inhalers, with more than 100,000 devices prescribed and dispensed in

primary care in Wales every month. In combination, they contribute to about 66% of the total inhaler carbon footprint each year. Equally effective alternatives exist which can reduce the carbon footprint by 50% (Salamol® MDI) or 98% (any short-acting beta-agonist (SABA) DPI).

The Medicines Management team have identified this area as an initial target to promote the use of a lower GWP inhaler (Salamol®) to be used instead of Ventolin®. Through use of a prescribing decision support software (ScriptSwitch®), appropriate switches and initial prescribing of the lower GWP inhaler Salamol® or a DPI is promoted at the point of prescribing.

Medicines Management team have also worked directly with practices to actively switch patients from Ventolin® to Salamol®. As this is a like-for-like switch from one MDI to another, there are no additional considerations with regards to a change in inhaler technique required. Although this does not impact the percentage of DPI prescribing, it does ensure that a lower GWP inhaler is used, thus reducing the overall carbon footprint of inhaler prescribing.



Picture 3: Trend analysis of monthly spend on salbutamol inhalers – identifying the reduction in Ventolin® prescribing and the subsequent increase in Salamol® prescribing since April 2022.

Borth Project

The Medicines Optimisation team within Ceredigion have recently completed a targeted inhaler decarbonisation project within Borth practice, which recently received a high commendation award from the Centre for Sustainable Healthcare Green Team competition. This project focused on two workstreams to reduce the carbon footprint of MDI inhalers being prescribed within this practice:

- Workstream 1 – Low carbon inhaler switch
 - Changing Ventolin® and generic salbutamol inhalers from high carbon MDIs to Salamol®.
 - Reduce the number of inhalers issued per repeat to 1 as per practice request.
- Workstream 2 – Reducing exacerbations
 - Identification of high-risk patients, deemed to be at an increased risk of respiratory exacerbations.
 - Support the practice to complete respiratory reviews with patients to agree a plan to better manage their condition and to reduce the number of SABAs being prescribed, improve their overall disease and to reduce their carbon footprint by changing inhalers to either lower carbon MDIs or, where possible, to DPIs.

Data from the 10-week project, identified an estimated annual savings of 20,182kgCO₂e for the practice, and if a similar action is implemented across Hywel Dda, then this could generate annual reduction of over 2million kgCO₂e, the equivalent of 6.4million miles driven in a car.

Formulary

As advised in the All Wales Adult Asthma management and prescribing guidelines and the All Wales COPD management and prescribing guidelines, patients should be maintained on one inhaler type to improve inhaler technique and simplify therapy. The All Wales Guidelines recognises the complexities around changing patients from one inhaler to another, and currently supports multiple options per drug class, which is mirrored within the Hywel Dda formulary. Hywel Dda Medicines Optimisation team has prepared an Inhaler Comparison Guide for both COPD and Asthma. These are based on the All Wales Asthma and COPD guides and outline suggested changes from MDI inhalers to DPI inhalers.

Acute Hospital Sites

Within acute hospital sites, the pharmacy and medicines management team continue to support the decarbonisation agenda in reviewing and identifying suitable patients that are admitted to hospital wards. This includes the use of an enabling policy for clinical pharmacists to make inhaler changes at ward level, ensuring the appropriate inhaler technique counselling is provided to the patient.

A pilot is also currently underway within the respiratory ward at PPH to remove the MDIs from ward stock, thus reducing the inappropriate use, choice and potential wastage or duplication of inhalers. Initial review of data has identified a reduction in MDI demand within this ward, and this is planned to be further reviewed and rolled out to other ward areas.

Practice Engagement

A Green Inhaler QI project has been included in Welsh Government's QIF for 2023-24 which will support the decarbonisation agenda. This QI project supports the work already underway and guided by the HB's decarbonisation group, as it aims to reduce the use of high GWP inhalers and reduce the overreliance of SABA reliever therapy. Practices will be required to complete a QI project to demonstrate engagement with the decarbonisation strategy. The Medicines Management team are working with primary care – locally and nationally – to develop QI project templates to support practices in achieving the aims of this project.

The Medicines Management team are also finalising the plans for the Prescribing Management Scheme for 2023-24, which (subject to confirmation) will include an element of payment based on practices' performance with regards to the National Prescribing Indicator on decarbonisation of inhalers.

Training & Education

An important element of the decarbonisation of inhalers plan is to educate health care professionals, and more importantly, patients on their inhalers and asthma/COPD management. The medicines management have co-produced supporting materials to share with both healthcare professionals and patients, to understand the impact of decarbonisation of inhalers, and to promote patients in taking ownership on their disease management, considering the environmental impact and why their inhalers may be changing.

Respiratory lead pharmacists have presented educational sessions across primary and secondary care, including to Grand Round, to promote the decarbonisation agenda and to share supporting materials to ensure that patients are initiated and continued on the right green inhaler for the right patient. The Primary Care Medicines Management team will also incorporate a respiratory and decarbonisation focus within the primary care prescribing leads sessions in March. This will include background information as well as practical examples to all prescribing leads to develop and implement their decarbonisation plan within their practice. The

sessions will also be available for all respiratory and practice nurses, who are involved with the chronic disease management of these patient.

An update to practices' decarbonisation NPI position is also incorporated into the annual practice prescribing visits by the Medicines Management team, with an opportunity to further share resources available to support the agenda within the practice.

When undertaken as part of a review, patients will be fully involved in the choices and options available to them. This will fully involve patients, not only having the opportunity to receive and discuss information around the carbon footprint, but importantly about which inhaler device is best suited to them to control their symptoms effectively.

Inhaler Recycling

An important factor within the decarbonisation of inhalers agenda is to ensure that all inhalers are recycled and disposed of in the most environmentally friendly process. Within primary care, all patients are promoted to return their inhalers to their community pharmacy for destruction, and Medicines Management team have produced communication resources to GP practices and Community Pharmacies to share with patients to promote this process. Although these inhalers are incinerated as part of the standard pharmaceutical waste disposal route, this is still a more environmentally friendly process than ending up in a landfill as part of normal household waste, as the high temperature in the process destroys any residual propellant gases resulting in safer disposal.

Within acute hospital sites, all four Pharmacy sites have been included in a submission to Welsh Government Climate Change team to be included in a wider secondary care inhaler recycling scheme, which will work with a specialised third party waste company to collect inhalers and to recycle all components of the inhaler – including capturing of any residual propellant gas that may remain. The Pharmacy and Medicines Management team are currently awaiting further confirmation from Welsh Government on the project.

Financial Impact

It is difficult currently to truly understand the financial impact of the decarbonisation of inhalers work. It is accepted that, whilst making a reduction on the carbon footprint, and aligning with local and national targets, changing patients from MDIs to DPIs, may come at an additional cost for the Health Board. On an inhaler-to-inhaler level switch, DPIs often are at a higher cost to MDIs, however the wider benefit from the focus on patient's overall disease management through patient-level education, and improved inhaler technique and compliance, is expected to lead to reduction in potential exacerbations, as well as improving overall symptom control and reducing the volume of inhalers prescribed – particularly of reliever SABA therapies. This is aligned to value based healthcare and utilising our resource effectively.

The cost acquisition of Salamol® is slightly less than the Ventolin® cost per inhaler, therefore the initial review of the impact of salbutamol switches has identified some cost saving benefits across the HB. The work completed as part of the Borth project identified a potential to save £5,623 per annum across the HB if similar acceptance of the switch was received across all practices. However, if patients are switched from a MDI to a salbutamol DPI (Salbutamol Easyhaler®) then this has the potential to increase annual cost by £133k based on a 50% switch. Similarly, if patients currently prescribed Clenil® MDI (most common corticosteroid MDI in use within Hywel Dda) is switched to a DPI, then this again could be at a significant cost increase of £89k per annum (based on a 50% switch).

To mitigate such cost pressures, the Medicines Management team are currently working with practices to recommend and switch to more cost effective options, where possible. Again,

these will not have a direct impact on the decarbonisation element, but they will ensure that the most cost effective MDI option is used, until the patient received a full medication review, and consideration for switching to a DPI. Current switch programs within the Medicines Management workplan include:

- Fostair® to Luforbec® (30% reduction in cost acquisition – potential £250k FYE saving (based on 50% switch))
- Clenil® to Soprobe® (25% reduction in cost acquisition – potential £47k FYE saving (based on 50% switch))

In addition, the teams are taking a more step wise approach, ensuring clinical review is incorporated in the approach. This can be seen by the most recent figures in percentage change over the past 3 months.

Table 1: Extract from NPI update

Table 10. DPIs and SMIs as a percentage of all inhalers prescribed

	2021–2022 Qtr 2	2022–2023 Qtr 2	% Change
Powys	25.9	29.0	12.0%
Cardiff And Vale	35.0	38.5	10.1%
Betsi Cadwaladr	24.6	26.5	7.82%
Aneurin Bevan	32.7	34.6	5.88%
Hywel Dda	35.4	37.1	4.74%
Cwm Taf Morgannwg	34.3	34.6	0.85%
Swansea Bay	28.8	29.0	0.69%
Wales	30.9	32.5	5.36%

Argymhelliad / Recommendation

The Sustainable Resources Committee is requested note and receive assurance regarding:

- The current position of the Health Board in achieving the NPI target of 80%
- The approach in place to balance the clinical and financial challenges.

Amcanion: (rhaid cwblhau)

Objectives: (must be completed)

Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	3.2 Seek assurance on delivery against all Planning Objectives aligned to the Committee, considering and scrutinising the plans, including the medium term financial plans, savings plans and decarbonisation plans, that are developed and implemented, supporting and endorsing these as appropriate (see Appendix 1).
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	N/A
Safon(au) Gofal ac Iechyd: Health and Care Standard(s):	2.6 Medicines Management 3.1 Safe and Clinically Effective Care

Amcanion Strategol y BIP: UHB Strategic Objectives:	3. Striving to deliver and develop excellent services 6. Sustainable use of resources 5. Safe sustainable, accessible and kind care
Amcanion Cynllunio Planning Objectives	6G_22 Decarbonisation and green initiatives plan
Amcanion Llesiant BIP: UHB Well-being Objectives: Hyperlink to HDdUHB Well-being Objectives Annual Report 2018-2019	1. Plan and deliver services to increase our contribution to low carbon 3. Promote the natural environment and capacity to adapt to climate change 4. Improve Population Health through prevention and early intervention, supporting people to live happy and healthy lives

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	All Wales Medicines Strategy Group
Rhestr Termiau: Glossary of Terms:	Included within report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Adnoddau Cynaliadwy: Parties / Committees consulted prior to Sustainable Resources Committee:	Medicines Management Operational Group

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	Potential increased financial pressures due to higher unit cost of inhalers. However, this is mitigated through the actions set out in this paper.
Ansawdd / Gofal Claf: Quality / Patient Care:	Better inhaler control will lead to improved patient care and symptom control.
Gweithlu: Workforce:	Limited workforce capacity will reduce the ability for primary care to review and assess patients accordingly. This applies to several professions who are able to undertake these reviews including GP, Respiratory Nurse and HB Pharmacists

Risg: Risk:	There is a risk of increased cost pressures due to higher unit cost of lower carbon inhalers. This is being mitigated by the steps set out in this paper.
Cyfreithiol: Legal:	Medicolegal if a patient condition worsened due to lack of review (this would not be as a consequence of this work but wider capacity challenges across primary care)
Enw Da: Reputational:	Positive impact in addressing carbon footprint
Gyfrinachedd: Privacy:	All access to notes, reviews and contacts undertaken within NHS confidentiality protocols.
Cydraddoldeb: Equality:	All patients who are assessed to require an inhaler will be within the scope of this project. No group is excluded