**Specification for the National Medicines Optimisation Opportunities Dashboard**

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# Background

The national medicines optimisation opportunities dashboard has been developed with NHS England to bring together data to support the [national medicines optimisation opportunities 2023/24](https://www.england.nhs.uk/long-read/national-medicines-optimisation-opportunities-2023-24/). It includes a collation of the headline metrics that have been selected to support the opportunity areas described in the guidance. Metrics for any remaining opportunities will be added when they have been developed and agreed by NHS England.

This specification is a technical document including details on the calculation of each metric included in the dashboard and other supporting information.

# Purpose

This dashboard aims to offer a streamlined solution to monitoring multiple opportunities, so that the position across the different areas can be seen in only one place. For each opportunity, it is possible to track progress, compare against peers, and identify good practice or scope for improvement. The headline metrics in this dashboard reflect the policy framework and aim to shed light on multiple areas of improvement, spanning aspects such as value for money, patient safety, quality, and environmental benefits.

This dashboard signposts to more detailed dashboards or products for each opportunity area and does not intend to offer a comprehensive, detailed view of each of the opportunities. Once opportunities are selected by systems, it is intended that this product is used in combination with more detailed reports and information about the chosen opportunities. Supporting materials and additional links to data sources for all opportunities can be found in the following [publication](https://www.england.nhs.uk/long-read/national-medicines-optimisation-opportunities-2023-24/).

# General technical notes

Data has been presented at the level of England (National), Region and Integrated Care Board (ICB) An additional view showing the lowest level organisations within each ICBs for which the metric is available. Normally this lowest level view will be:

* GP Practice or Primary Care Prescribing Cost Centre for primary care metrics,
* NHS trust for secondary care metrics.

Most of the metrics are available in more detail in other platforms or products, and the calculation follows these other sources as closely as possible. This may mean that metrics tend to focus on either primary or secondary care settings and do not necessarily cover both settings. For example, ePACT2 dashboards based on GP Practice Prescribing would typically exclude any prescriptions dispensed in community pharmacies that had been prescribed by Prescribing Cost Centres linked to NHS Trusts. The detailed specification for each metric given here will highlight any such exclusions.

# Primary care prescribing metrics – general notes

All data is based on prescriptions from English prescribing organisations that were submitted to the NHSBSA for processing.

English prescribing that has been dispensed in Wales, Scotland, Guernsey / Alderney, Jersey and Isle of Man is also included – however, these items may be effectively excluded from the comparators that include only prescriptions items for which a patient could be identified.

All data excludes:

* Items not dispensed, disallowed and those returned to the contractor for further clarification.
* Prescriptions prescribed and dispensed in Prisons, Hospitals and Private prescriptions.
* Items prescribed but not presented for dispensing or not submitted to NHS Prescription Services by the dispenser

Medicine groups are based on the British National Formulary (BNF) classification system prior to BNF edition 70. This also includes pseudo-BNF codes assigned to appliances and several annual updates made by NHSBSA. A mapping document showing how these BNF codes map to SNOMED codes can be found on the NHSBSA website – [‘BNF to SNOMED Mapping Document’](https://www.nhsbsa.nhs.uk/prescription-data/understanding-our-data/bnf-snomed-mapping).   
  
More information on annual updates can be found on the NHSBSA website – for example: [‘BNF Code Changes January 2022’](https://www.nhsbsa.nhs.uk/bnf-code-changes-january-2022).   
  
The specific BNF Chapters, Sections, Paragraphs used for each metric are given below or in other specifications referred to below. Note that BNF classifications are based on a primary therapeutic area for a product and do not necessarily reflect the specific indication for a prescription.

# Secondary care prescribing metrics – general notes

For the purpose of bringing all opportunities data together, this product features some secondary data care data which is licensed but not owned by NHSBSA. Secondary care data is collected, collated and standardised by Rx-info. The data is derived from multiple hospital sources (in-patient pharmacy system, homecare, FP10HNC, third-party out-patient provider, etc.) and results into a reportable dataset. NHSBSA receive bespoke data extracts which are then ingested into ePACT2.

Specifically, data within this dashboard is pulled from two of the Rx-info packages, Define and Exend+. These packages derive from Trusts allowing data sharing within the NHS through national license agreements. Define has been designed to gather issues data about medicines used in hospitals and benchmark their use against others in a cohort. Exend+ monitors contract tendering and NHS contract adherence performance, through contract variance reporting.

To prevent the disclosure of commercially confidential information at NHS Trust level, some information may be supressed (e.g., numerators and denominators behind the metric displaying the % of contract variance).

A few Trusts have missing data for this metric due to pharmacy stock control system integration issues with Exend+. Work is ongoing to remediate this.

A few Trusts might have small negative values (due to medicines returns) or other inconsistent data points in some months, these might be removed or suppressed to keep the metric within the expected range. These issues are noted in the supporting information for the relevant metrics.

Rx-info uses [current ODS portal published codes](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fodsportal.digital.nhs.uk%2F&data=05%7C02%7Canarita.ubaldo%40nhs.net%7C6935d4e318d948fc7fae08dc6459b732%7C37c354b285b047f5b22207b48d774ee3%7C0%7C0%7C638495583709484632%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=qwoFP%2BQsQJE0dUdRh7ekDIi1ijiMa%2BatBHLr4Ug9G%2Bg%3D&reserved=0) and has merged organisations in accordance with current NHS structure. For historic data, Rx-info Define data extracts use the historic trust codes, for some of the metrics these have been mapped onto new trust.

Data is revised in Rx-info, with the monthly updates reflecting the snapshot at the time of update. Each month, the time series is updated with the most recent data at the time of update. Extraction timings can explain discrepancies between the dashboard and data extracted directly from Rx-info at a different point in time. Data is collated on a daily basis and backtracking of issues and purchases will take place in Define and Exend+.

# Approach to ranking organisations in terms of high and low opportunities

The Region and ICB pages offer a ranked view across all opportunities, this ranks organisations for each opportunity according to the value of their headline metric on a given period. Organisations or geographies are ranked according to the improvement direction of each metric – this can be found in the table below.  
  
For example:

* For Problematic Polypharmacy (**Lower**) a rank of 1 represents the **highest** metric value, and therefore the greatest scope for improvement. Higher ranks represent a lower scope for improvement.
* For Reducing course length of antimicrobial prescribing (**Higher**) a rank of 1 represents the **lowest** metric value, and therefore the greatest scope for improvement. Higher ranks represent a lower scope for improvement.

The ranked view can provide a relative view of which opportunities have the highest scope of improvement in relation to other organisations. The metric value view can show the absolute value and the size of differences between organisations.

Note that we do not expect this to be read in isolation. In some instances, it will be relevant to compare the trend of a specific organisation to assess the trajectory of the metric for an opportunity, or to compare a selected organisation or geography to similar peers – see the next section for more information.

|  |  |  |
| --- | --- | --- |
| **Opportunity** | **Headline metric** | **Improvement direction** |
| Addressing problematic polypharmacy | Percentage of patients aged 75 and over on 10 or more unique medicines | Lower |
| Improving valproate safety | Number of female patients prescribed valproate per 1,000 population | Lower |
| Addressing low priority prescribing | Total cost per 1,000 registered patients for NHS England low priority treatments | Lower |
| Appropriate prescribing and supply of blood glucose and ketone meters, and testing strips | Percentage of spend on recommended blood glucose and ketone testing strips for 12-month rolling period | Higher |
| Improving respiratory outcomes while reducing the carbon emissions from inhalers | Greenhouse gas emissions (kgCO2e) from inhalers per patient | Lower |
| Reducing course length of antimicrobial prescribing | Percentage of shorter (5-day) antibiotic courses | Higher |
| Switching intravenous antibiotics to oral | Proportion of total antibiotic treatment days administered intravenously | Lower |
| Obtaining secondary care medicines in line with NHS England commercial medicines framework agreements | Contract variance as a percentage of total spend | Lower |
| Reducing opioid use in chronic non-cancer pain | Patients aged 18+ currently prescribed an oral or transdermal opioid for more than three months per 1,000 patients in GP list | Lower |
| Patients using best value direct-acting oral anticoagulants | Percentage of direct-acting oral anticoagulant prescription items that were generic apixaban | Higher |
| Using best value biologic medicines in line with NHS England commissioning recommendations | Biosimilar share of ranibizumab singles | Higher |

# Selecting peer groups for comparison

The dashboard offers an ICB Comparison view that enable analysis of many comparators across many ICBs together. On this page there are prompts that enable the user to choose a set of ICBs and Comparators.  
  
Any set of ICBs can be selected but a User may prefer to select ICB from their region, or to consult information on “similar 10” organisations based on information available in the [NHS RightCare Methods Toolbox in FutureNHS](https://future.nhs.uk/DataMeth/browseFolder?done=DOCCreated&sm_docs=3&fid=17449616).

Users who have selected a preferred peer group may find the ePACT2 “Save Current Customisation” option useful so they can easily return to previously selected groups. This can be after selecting the preferred ICBs and Metrics by using the “Gear” icon towards the top right-hand corner of the ePACT2 screen.

A screenshot of a computer

Description automatically generated

# Thresholds for highlighting high and low opportunity organisations

Some of the dashboard sections show the number of organisations with “high” or “low” scope for improvement. This is based on a distribution of lower-level organisations nationally and depends on the set threshold which users can personalise.

For the example of addressing problematic polypharmacy, with a chosen threshold of 20%:

The organisations classed as “high scope for improvement” will be those on the top 20% of the national distribution of the percentage of patients aged 75 and over on 10 or more unique medicines, across all practices in England.   
  
Note that as the thresholds are set based on the national distribution of trusts or primary care prescribing cost centres it is possible for an ICB to have no sub-organisations above the upper or below the lower level.  
  
The ICB Organisations page demonstrates this distribution and the classification of the low level organisations within the selected ICB.  
A screenshot of a computer

Description automatically generated  
  
Choosing a lower Threshold Percentile will highlight practices that are further towards the top or bottom of the distribution. For example, choosing 5% for this metric highlights a smaller number of practices.  
A screenshot of a computer

Description automatically generated

For the example of appropriate prescribing and supply of blood glucose and ketone meters, and testing strips, with a threshold of 25%:

The organisations classed as “high scope for improvement” will be those on the top 25% of the national distribution of the percentage of spend on recommended blood glucose and ketone testing strips, across all Practices in England.   
A screenshot of a computer

Description automatically generated  
  
Secondary care measures are more sensitive to the selection of the threshold percentile as these are typically reported at the level of NHS Trusts meaning there are fewer organisations nationally, and fewer within each ICB that for GP Practices. Any missing data for a Trust can skew the position for an ICB quite significantly.

# Metric Specifications

Please note as new metrics are developed and added to the dashboard more information may be added here. Metrics are ordered and given a number that matches the National medicines optimisation opportunities 2023/24 guidance document. Where a headline metric is not available, there may be gaps in the sequence of numbers.

## Metric 01.Problematic polypharmacy

|  |  |
| --- | --- |
| Opportunity title | Problematic polypharmacy |
| Opportunity description | Addressing problematic polypharmacy |
| Metric type | Primary care |
| Metric description | Percentage of patients aged 75 and over on 10 or more unique medicines |
| Is Higher or lower "better"? | Lower |
| Numerator | Number of patients aged 75 or over prescribed 10 or more unique medicines from BNF Chapters 1-4,6-10 in a single month |
| Numerator unit of measure | Patients |
| Denominator | Total number of patients aged 75 and over, prescribed one or more medicines within BNF chapters 1 to 4 and 6 to 10 during same time period |
| Denominator unit of measure | Patients |
| Hyperlinks to supporting information | NHSBSA - Polypharmacy Prescribing Comparators - Summary webpage |
| [Health Innovation Wessex - Polypharmacy Overview](https://healthinnovationwessex.org.uk/projects/576/polypharmacy-programme-overview) |
| Notes | Includes items prescribed by English GP Practices with 'active' status. |
|  | Patients may appear in the numerator or denominator for multiple organisations, and in many months. |
|  | Unique medicines are defined as the count of unique BNF Chemical substances dispensed for the patient in the reporting month. |
| Medicine Group Definitions | All BNF Chemical Substances that are mapped to the following BNF Chapters are included.   |  |  | | --- | --- | | **BNF Chapter Code** | **BNF Chapter** | | 01 | Gastro-Intestinal System | | 02 | Cardiovascular System | | 03 | Respiratory System | | 04 | Central Nervous System | | 06 | Endocrine System | | 07 | Obstetrics, Gyn. and Urinary Tract Disorders | | 08 | Malignant Disease and Immunosuppression | | 09 | Nutrition And Blood | | 10 | Musculoskeletal and Joint Diseases | |
| Other inclusion or exclusion criteria: | Includes active English GP Practices only |

## Metric 02.Low priority prescribing

|  |  |
| --- | --- |
| Opportunity title | Low priority prescribing |
| Opportunity description | Addressing low priority prescribing |
| Metric type | Primary care |
| Metric description | Total actual cost per 1,000 registered patients for NHS England low priority treatments |
| Is Higher or lower "better"? | Lower |
| Numerator | Total Actual Cost of all items in the medicines value programme items which should not be routinely prescribed in primary care in the rolling 3 month period |
| Numerator unit of measure | Actual Cost GBP |
| Denominator | Total number of registered patients in the rolling 3 month period |
| Denominator unit of measure | Patients |
| Hyperlinks to supporting information | [NHS England - Items which should not be routinely prescribed in primary care](https://www.england.nhs.uk/medicines/items-which-should-not-be-routinely-prescribed/) |
| [NHSBSA - Items which should not be routinely prescribed in primary care - Summary webpage](https://www.nhsbsa.nhs.uk/access-our-data-products/epact2/dashboards-and-specifications/items-which-should-not-be-routinely-prescribed-primary-care) |
| [OpenPrescribing - Items which should not routinely be prescribed in primary care](https://openprescribing.net/measure/lpzomnibus/) |
| Notes | Does not include the costs of prescribing of over the counter items which should not be routinely prescribed in primary care. See ePACT2 'Over the counter' dashboard for further details. |
|  |  |
|  |  |
| Medicine Group Definitions | All medicines included in the ePACT2 dashboard ‘Items not for routine prescribing – see the Supporting Information page Drug Classifications section for the detailed list.  Alternatively, medication groups can be found in the following guidance: [NHS England » Items which should not routinely be prescribed in primary care: policy guidance](https://www.england.nhs.uk/long-read/items-which-should-not-routinely-be-prescribed-in-primary-care-policy-guidance/) |
| Other inclusion or exclusion criteria: | Includes active English GP Practices with list size of 1 or greater |

## Metric 04.Secondary care commercial framework

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| --- | --- |
| Opportunity title | Secondary care commercial framework |
| Opportunity description | Obtaining secondary care medicines in line with NHS England commercial medicines framework agreements |
| Metric type | Secondary care |
| Metric description | Percentage difference between contract price as per framework agreements and actual price paid as a percentage of total spend in secondary care medicines |
| Is Higher or lower "better"? | Lower |
| Numerator | Total difference between price paid and price established in the commercial framework - rolling 12-month period.  Note only the metric data is visible to users, numerator is hidden due to commercial sensitivities. |
| Numerator unit of measure | GBP |
| Denominator | Total difference between price paid and price established in the commercial framework - rolling 12-month period. |
| Denominator unit of measure | GBP |
| Hyperlinks to supporting information | [RX-info - Exend+ data](https://www.rx-info.co.uk/products/exend/) |
| [NHS England - Medicines Efficiencies - FutureNHS Collaboration Platform](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Ffuture.nhs.uk%2FMedicinesEfficiencies&data=05%7C01%7Canarita.ubaldo%40nhs.net%7C88f7e87a61f54007cd5f08dbe9f00f44%7C37c354b285b047f5b22207b48d774ee3%7C0%7C0%7C638360989469413243%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=zNq5Bgc1O1432Xk%2FbNx2ANmSJavJDlVKLHZXylr42GU%3D&reserved=0) |
| Notes | RX-info data may be subject to revision.  This metric only includes Trusts for which the contract variance information is available.  Some Trusts have missing data for this metric due to integration issues with Exend+.  Data from April 2024 and after is presented on a rolling 12-month basis. Data before March 2024 is presented on a year-to-date basis as 12 months of historical data is not available. See "reported time period" column in the reports for details. |
| Medicine Group Definitions |  |
| Other inclusion or exclusion criteria: |  |

## Metric 05. Standardising product formulations of aseptically compounded medicines

|  |  |
| --- | --- |
| Opportunity title | Standardising product formulations of aseptically compounded medicines |
| Opportunity description | This metric provides a proportion (%) of transactions for aseptically compounded products that are consistent with national dose banding standards for injectable and infusion based chemotherapy treatments for BNF chapter 8 (8.1.1 to 8.1.5) AND have a dm+d code consistent with a standard product specification. |
| Metric type | Secondary |
| Metric description | This metric estimates the percentage of transactions for aseptically compounded products within BNF chapter 8 that are consistent with national standard product specifications, through calculating the proportion of dose banded products with a dm+d code used. |
| Is Higher or lower "better"? | Higher |
| Numerator | This metric is derived by employing the Rx-info Define FLAG for Compounded Products and TAG for Dose Band Compliant Chemotherapy. It quantifies the percentage of products that are procured using dose banding and dm+d that are consistent with national standard product specifications. |
| Numerator unit of measure | Number of transactions per month |
| Denominator | This metric is derived by employing the Rx-info Define FLAG for Compounded Products and TAG for Dose Band Compliant Chemotherapy. It quantifies the percentage of products that are procured using dose banding and dm+d that are consistent with national standard product specifications. |
| Denominator unit of measure | Number of transactions per month |
| Hyperlinks to supporting information | [NHS England » 2022/23 priorities and operational planning guidance](https://www.england.nhs.uk/publication/2022-23-priorities-and-operational-planning-guidance/) |
| [TAG numerator](https://rxinfo.thirdparty.nhs.uk/reports/Report?ConfiguredDateRange=+&DateRange.StartMonth=Apr+2023&DateRange.EndMonth=Apr+2024&Scope=eng&country=e&stpr=all&nhse=all&clust=all&type=all&BNF=8.1.1&BNF=8.1.2&BNF=8.1.3&BNF=8.1.4&BNF=8.1.5&Tag=Dose+Band+Compliant+Chemotherapy&SourceDrugTag=20&ExcludeRoute=77&ExcludeRoute=35&SpecialtyFilterPreset=ExcludingStockAndSales&Value=Transactions&Category=Trust&Series=t-Month&SortCategoriesBy=Default&SortSeriesBy=Default&TopTypeCombination=Categories#horizontal&stacked&zeroOrigin) |
| [FLAG denominator](https://rxinfo.thirdparty.nhs.uk/reports/Report?ConfiguredDateRange=+&DateRange.StartMonth=Apr+2023&DateRange.EndMonth=Mar+2024&Scope=eng&country=e&stpr=all&nhse=all&clust=all&type=all&BNF=8.1.1&BNF=8.1.2&BNF=8.1.3&BNF=8.1.4&BNF=8.1.5&SourceDrugTag=20&ExcludeRoute=77&ExcludeRoute=35&SpecialtyFilterPreset=ExcludingStockAndSales&Value=Transactions&Category=Trust&Series=t-Month&SortCategoriesBy=Default&SortSeriesBy=Default&TopTypeCombination=Categories#horizontal&stacked&zeroOrigin) |
| Notes | All national product specifications have an assigned dm+d code, so can be distinguished from other aseptic products that may be dose-banded, but not consistent with the national specifications in terms of formulation. As more standard products specifications are produced and products with dm+d codes are issued in pharmacy systems, the percentage for this metric will increase.  It is important to note that some compounded products may be listed as complete ‘vials’ in RxInfo reporting due to variety in local trust descriptors in the pharmacy stock control system, and they lack a dose band and dm+d code. However, as these compounded products become compliant with dose banding and acquire dm+d codes, both the data quality and the metric indicator will significantly improve. |
| Medicine Group Definitions |  |
| Other inclusion or exclusion criteria: |  |

## Metric 06. Best value biologics - ranibizumab

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| --- | --- |
| Opportunity title | Best value biologics - ranibizumab |
| Opportunity description | Using best value biologic medicines in line with NHS England commissioning recommendations |
| Metric type | Secondary care |
| Metric description | Biosimilar share of ranibizumab singles |
| Is Higher or lower "better"? | Higher |
| Numerator | Quantity of ranibizumab biosimilar singles issued |
| Numerator unit of measure | Number of singles |
| Denominator | Quantity of ranibizumab originator or biosimilar singles issued |
| Denominator unit of measure | Number of singles |
| Hyperlinks to supporting information | [NHS England - Updated commissioning recommendations following the national procurement for ranibizumab biosimilars](https://www.england.nhs.uk/long-read/operational-note-updated-commissioning-recommendations-for-medical-retinal-vascular-medicines-following-the-national-procurement-for-ranibizumab-biosimilars/) |
| Notes | RX-info data may be subject to revision.  Some trusts are missing from this metric due to a lack of reliable data or inconsistent data points.  RX-info define data extracts use historic trust codes these have been mapped onto new trust codes where possible. |
|  |  |
|  |  |

Continued overleaf

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| --- | --- |
|  | |
| Medicine Group Definitions | **Ranibizumab biosimilar, originator and other classification**   |  |  |  |  | | --- | --- | --- | --- | | **VMP** | **VMP** | **AMP** | **Category** | | 1563 | Ranibizumab 2.3mg/0.23ml solution for injection vials | Ongavia 2.3mg/0.23ml solution for injection vials | Biosimilar | | 1563 | Ranibizumab 2.3mg/0.23ml solution for injection vials | Lucentis 2.3mg/0.23ml solution for injection vials | Originator | | 17431 | Ranibizumab 1.65mg/0.165ml solution for injection pre-filled syringes | Lucentis 1.65mg/0.165ml solution for injection pre-filled syringes | Originator | | 16338 | Aflibercept 4mg/100microlitres solution for injection vials | Eylea 4mg/100microlitres solution for injection vials | Other | | 21253 | Aflibercept 3.6mg/90microlitres solution for injection pre-filled syringes | Eylea 3.6mg/90microlitres solution for injection pre-filled syringes | Other | | 21040 | Brolucizumab 19.8mg/0.165ml solution for injection pre-filled syringes | Beovu 19.8mg/0.165ml solution for injection pre-filled syringes | Other | | 22432 | Faricimab 28.8mg/0.24ml solution for injection vials | Vabysmo 28.8mg/0.24ml solution for injection vials | Other | | 1563 | Ranibizumab 2.3mg/0.23ml solution for injection vials | Ximluci 2.3mg/0.23ml solution for injection vials | Biosimilar | | 1563 | Ranibizumab 2.3mg/0.23ml solution for injection vials | Byooviz 2.3mg/0.23ml solution for injection vials | biosimilar | | 23700 | Aflibercept 30.1mg/263microlitres solution for injection vials | Eylea 30.1mg/263microlitres solution for injection vials | other | |
| Other inclusion or exclusion criteria: |  |

## Metric 08.Prescribing of blood glucose, ketone meters, and testing strips

|  |  |
| --- | --- |
| Opportunity title | Prescribing of blood glucose, ketone meters, and testing strips |
| Opportunity description | Appropriate prescribing and supply of blood glucose and ketone meters, and testing strips |
| Metric type | Primary care |
| Metric description | Percentage of spend (NIC GBP) on recommended blood glucose and ketone testing strips prescribed out of spend (NIC GBP) on all blood glucose and ketone testing strips prescribed |
| Is Higher or lower "better"? | Higher |
| Numerator | Total Net Ingredient Cost (NIC GBP) for recommended blood glucose and ketone testing strips (12-month rolling) |
| Numerator unit of measure | Net Ingredient Cost (GBP) |
| Denominator | Total Net Ingredient Cost (NIC GBP) for all blood glucose and ketone testing strips (12-month rolling) |
| Denominator unit of measure | Net Ingredient Cost (GBP) |
| Hyperlinks to supporting information | [NHS England - Commissioning recommendations following the national assessment of blood glucose and ketone meters, testing strips and lancets](https://www.england.nhs.uk/publication/commissioning-recommendations-blood-glucose-and-ketone-meters-testing-strips-and-lancets/) |
| [Model Health System - Percentage of recommended blood glucose and ketone testing strips items prescribed out of all blood glucose and ketone testing strip items - Requires login](https://model.nhs.uk/metrics/8897a03b-0b42-4412-be2f-a8c17294d1ce?domainId=cb17cb36-b002-4535-8cd6-ed9818883312&compartmentId=49c89d81-a343-419d-a815-1bc7cd179742) |
| Notes |  |
|  |  |
|  |  |
| Medicine Group Definitions | **All blood glucose and ketone testing strips (Denominator):**   |  |  | | --- | --- | | **BNF Chemical Substance Code** | **BNF Chemical Substance** | | 0601060D0 | Glucose blood testing reagents | | 0601060W0 | Ketone blood testing reagents | | 0601060X0 | Glucose and ketone blood testing reagents | |
| Continued overleaf | |
|  | **Recommended blood glucose and ketone testing strips (Numerator):**   |  |  | | --- | --- | | **BNF Presentation Code** | **BNF Presentation** | | 0601060D0CIAAA0 | WaveSense JAZZ testing strips | | 0601060D0CIABA0 | WaveSense JAZZ Duo testing strips | | 0601060D0CUAAA0 | GlucoRx Q testing strips | | 0601060D0CUABA0 | GlucoRx Nexus testing strips | | 0601060D0CUACA0 | GlucoRx HCT Glucose testing strips | | 0601060D0EDAAA0 | Finetest Lite testing strips | | 0601060D0EHAAA0 | CareSens PRO testing strips | | 0601060D0EJAAA0 | True Metrix testing strips | | 0601060D0EKAAA0 | 4SURE testing strips | | 0601060D0ENAAA0 | Contour Plus testing strips | | 0601060D0EUAAA0 | On Call Extra testing strips | | 0601060D0EVAAA0 | GLUCOFIX TECH Sensor testing strips | | 0601060W0BEAAA0 | GlucoRx HCT Ketone testing strips | | 0601060W0BFAAA0 | KetoSens testing strips | | 0601060W0BGAAA0 | 4SURE beta-ketone testing strips | | 0601060X0BBAAA0 | KEYA Smart testing strips | |
| Other inclusion or exclusion criteria: | Includes active English Primary Care Prescribing Cost Centres (linked to SICBLs) |

## Metric 09. Best value direct-acting oral anticoagulants

|  |  |
| --- | --- |
| Opportunity title | Best value direct-acting oral anticoagulants |
| Opportunity description | Patients using best value direct-acting oral anticoagulants |
| Metric type | Primary care |
| Metric description | Percentage of direct-acting oral anticoagulant prescription items that were generic apixaban or rivaroxaban |
| Is Higher or lower "better"? | Higher |
| Numerator | Number of defined daily doses (DDD) of generic apixaban or rivaroxaban tablets and capsules dispensed in a rolling 3-month period |
| Numerator unit of measure | Defined Daily Doses (DDDs) |
| Denominator | Number of defined daily doses of edoxaban, rivaroxaban, dabigatran, or apixaban tablets and capsules dispensed in a rolling 3-month period |
| Denominator unit of measure | Defined Daily Doses (DDDs) |
| Hyperlinks to supporting information | [NHS England - Commissioning recommendations for national procurement for direct-acting oral anticoagulant(s) (DOACs)](https://www.england.nhs.uk/long-read/commissioning-recommendations-for-national-procurement-for-doacs/#:~:text=If%20the%20highest%20ranked%20best,and%20so%20on%20until%20an) |
| Notes | Includes a primary care prescribing cost centres mapped via SICBLs only, where currently listed as 'Active' |
| Medicine Group Definitions | All presentations including those prescribed by brand or with a named supplier within the following generic BNF codes are included.   |  |  | | --- | --- | | **BNF Generic Equivalent Presentation Code** | **BNF Generic Equivalent Presentation** | | 0208020AAAAAAAA | Edoxaban 15mg tablets | | 0208020AAAAABAB | Edoxaban 30mg tablets | | 0208020AAAAACAC | Edoxaban 60mg tablets | | 0208020X0AAAAAA | Dabigatran etexilate 75mg capsules | | 0208020X0AAABAB | Dabigatran etexilate 110mg capsules | | 0208020X0AAACAC | Dabigatran etexilate 150mg capsules | | 0208020Y0AAAAAA | Rivaroxaban 10mg tablets | | 0208020Y0AAABAB | Rivaroxaban 15mg tablets | | 0208020Y0AAACAC | Rivaroxaban 20mg tablets | | 0208020Y0AAAEAE | Rivaroxaban 15mg tablets and Rivaroxaban 20mg tablets | | 0208020Z0AAAAAA | Apixaban 2.5mg tablets | | 0208020Z0AAABAB | Apixaban 5mg tablets | |
| Continued overleaf | |
|  | The DDDs were calculated based on the following values:   |  |  | | --- | --- | | **BNF Chemical Substance plus Code** | **DDD Value (mg)** | | Edoxaban (0208020AA) | 60 | | Dabigatran etexilate (0208020X0) | 300 | | Rivaroxaban (0208020Y0) | 20 | | Apixaban (0208020Z0) | 10 | |
| Other inclusion or exclusion criteria: | Includes active English Primary Care Prescribing Cost Centres (linked to SICBLs) |

## Metric 11.Carbon emissions from inhalers

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| --- | --- |
| Opportunity title | Carbon emissions from inhalers |
| Opportunity description | Improving respiratory outcomes while reducing the carbon emissions from inhalers |
| Metric type | Primary care |
| Metric description | Greenhouse gas emissions (kgCO2e) from inhalers per patient |
| Is Higher or lower "better"? | Lower |
| Numerator | The volume of greenhouse gas emissions from inhalers (in kgCO2e) in a 3 month rolling period |
| Numerator unit of measure | kilogrammes of carbon dioxide equivalent (kgCO2e) |
| Denominator | Total number of patients prescribed one or more inhalers in a 3 month period. Each patient is counted once per month in which they were prescribed an inhaler. |
| Denominator unit of measure | Patients (patient months) |
| Hyperlinks to supporting information | [Greener NHS Dashboard - Inhaler emissions - Requires login](https://apps.model.nhs.uk/search?SearchText=greener%20nhs&Page=1&Facets=Product&Facets=Type&Facets=Hierarchy/Lvl1&Filters=Hierarchy/Lvl1%20eq%20%27Climate%20Change%27) |
| [OpenPrescribing - Environmental impact of inhalers](https://openprescribing.net/measure/environmental_inhalers/) |
| Notes | When exact emissions are not known average emissions values for inhalers based on device type and therapeutic group are used |
|  | Patients may appear in the denominator for multiple organisations |
|  | Figures may not match the more detailed Greener NHS metrics exactly due differences in the data source for national data, simplification in emissions factor assumptions and the treatment of practices and other types of prescribing organisation. |
| Medicine Group Definitions | See Appendix 1 for a description of the inhalers and GHG emissions factors used. |
| Other inclusion or exclusion criteria: | Includes active English GP Practices and items with identified patients only |

## Metric 12.Valproate safety

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| --- | --- |
| Opportunity title | Valproate safety |
| Opportunity description | Improving valproate safety |
| Metric type | Primary care |
| Metric description | Female patients prescribed valproate per 1,000 population |
| Is Higher or lower "better"? | Lower |
| Numerator | Number of female patients in the age band 13-54 in the three-month period, who have been prescribed one or more items of a valproate product |
| Numerator unit of measure | Patients |
| Denominator | Number of female patients in the age band 13-54, who are registered with GP practices, in the same three-month period |
| Denominator unit of measure | List Size |
| Hyperlinks to supporting information | [NHSBSA - Valproate safety dashboard - Summary webpage](https://www.nhsbsa.nhs.uk/access-our-data-products/epact2/dashboards-and-specifications/valproate-safety-dashboard) |
| [NHS England - Medicines and Pregnancy Registry](https://digital.nhs.uk/data-and-information/publications/statistical/mi-medicines-and-pregnancy-registry) |
| Notes | This is a proxy metric as it does not fully reflect the safe prescribing of valproate, instead highlighting the extent of valproate prescribing. Please ensure that female patients taking valproate and with childbearing potential are participating in the Pregnancy Prevention Programme - please make use of your local data to investigate further. |
|  |  |
|  |  |
| Medicine Group Definitions | The detailed list of medicines and specification can be found here: [NHSBSA - Valproate safety dashboard - Summary webpage](https://www.nhsbsa.nhs.uk/access-our-data-products/epact2/dashboards-and-specifications/valproate-safety-dashboard)  Medicines under the following chemical substances have been included in the indicators:   |  |  | | --- | --- | | **BNF Chemical Substance Code** | **BNF Chemical Substance Name** | | 0408010W0 | Sodium Valproate | | 0402030Q0 | Valproic acid | | 040801020 | Valproic acid | |
| Other inclusion or exclusion criteria: | Active English GP Practices. Items with identified female patients aged 13 to 54 years old |

## Metric 14.Course length of antimicrobial prescribing

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| --- | --- |
| Opportunity title | Course length of antimicrobial prescribing |
| Opportunity description | Reducing course length of antimicrobial prescribing |
| Metric type | Primary care |
| Metric description | Percentage of shorter (5-day) antibiotic courses |
| Is Higher or lower "better"? | Higher |
| Numerator | Items of amoxicillin 500mg capsules prescribed as 15 capsules |
| Numerator unit of measure | Items at quantity = 15 capsules |
| Denominator | Items of amoxicillin 500mg capsules prescribed as any quantity |
| Denominator unit of measure | Items |
| Hyperlinks to supporting information | [NICE - Antimicrobial stewardship](https://www.nice.org.uk/guidance/conditions-and-diseases/infections/antimicrobial-stewardship) |
| [PrescQIPP - Antimicrobial Stewardship (AMS) Hub - Open access](https://www.prescqipp.info/our-resources/webkits/antimicrobial-stewardship/) |
|  |  |
| Notes | Note figures are expected to be revised due a technical compromise for the initial release requiring the use of identified patient data only. |
|  |  |
|  |  |
| Medicine Group Definitions | Amoxicillin 500mg capsules - all medicines classified with generic BNF Presentation as 0501013B0AAABAB |
| Other inclusion or exclusion criteria: | Includes active English Primary Care Prescribing Cost Centres (linked to SICBLs) with identified patients only |

## Metric 15.Opioid use

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| --- | --- |
| Opportunity title | Opioid use |
| Opportunity description | Reducing opioid use in chronic non-cancer pain |
| Metric type | Primary care |
| Metric description | Patients aged 18+ currently prescribed an oral or transdermal opioid for more than three months per 1,000 patients in GP list |
| Is Higher or lower "better"? | Lower |
| Numerator | Patients aged 18+ prescribed an oral or transdermal opioid for each of the last four months |
| Numerator unit of measure | Patients |
| Denominator | Patients aged 18+ on GP list, four month average |
| Denominator unit of measure | Patients |
| Hyperlinks to supporting information | [NHS England - Medicines Safety Improvement Programme](https://www.england.nhs.uk/patient-safety/patient-safety-improvement-programmes/) |
| [NHSBSA - Opioid Prescribing Comparators - Summary webpage](https://www.nhsbsa.nhs.uk/access-our-data-products/epact2/dashboards-and-specifications/opioid-prescribing-comparators-dashboard) |
| [OpenPrescribing - Prescribing of opioids](https://openprescribing.net/measure/opioidome/) |
| Notes | Note this measure has been presented as a ratio per 1,000 GP list patients for comparative purposes. For patient safety purposes, the raw number of patients is also considered an important source of insight - see the "numerator" information within the detailed data tables, or other resources provided by the NHS England Medicines Safety Improvement Programme (MedSIP).  The aggregated GP list used for groups of GP Practices is based on the sum of four-month averaged list sizes. This may not be consistent with other measures of list sizes depending on the treatment of practices that open or close throughout the four-month period and the 'latest' practice used to report the patients in the numerator. |
|  |  |
|  |  |
| Continued overleaf | |
| Medicine Group Definitions | See the NHSBSA [ePACT2 medicines safety dashboard specification](https://www.nhsbsa.nhs.uk/access-our-data-products/epact2/dashboards-and-specifications/medication-safety) PAIN03 comparator for more details.  Oral or transdermal opioids are defined as:   |  |  |  | | --- | --- | --- | | **Group** | **BNF Description** | **BNF Code** | | Oral medicines containing 15mg or more of codeine or  10mg or more of dihydrocodeine | Non-Opioid Analgesics And  Compound Prep (sub-set) | 040701 | | Oral or transdermal opioids | Opioid Analgesics (sub-set) | 040702 |   A more detailed list of the sub-sets is included in Appendix 1. Note this list may be periodically reviewed to pick up new brands or formulations but there may be a period of time between a brand entering the market and being added to the drug grouping used in the dashboard. |
| Other inclusion or exclusion criteria: | Includes English NHS prescriptions linked to identified patients for whom NHS BSA holds data for a registered GP practice only, aged 18 or over |

## Metric 16.IV antibiotics to oral

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| --- | --- |
| Opportunity title | IV antibiotics to oral |
| Opportunity description | Timely intravenous-to-oral switch (IVOS) of antimicrobials is an important antimicrobial stewardship intervention. Research evidence confirms several IVOS benefits, including shorter hospital length-of-stay, decreased risk of bloodstream infections, released nursing time to care for patients, increased patient mobility and comfort, reduced carbon footprint and reduced drug and equipment costs.  The UK Health Security Agency (UKHSA) and NHSE have developed national guidelines for antimicrobial intravenous-to-oral switch (IVOS), including criteria for timely switch. Adherence to these guidelines is the focus of a 2024/25 NHS England Commissioning for Quality and Innovation (CQUIN) indicator. Compliance with the IVOS CQUIN is also published as an AMR local indicator on Public Health Profiles (Fingertips). |
| Metric type | Secondary care |
| Metric description | This indicator presents the number of treatment days (expressed as WHO DDDs) of intravenous antibiotics dispensed in secondary care organisations per hospital admission. |
| Is Higher or lower "better"? | Lower |
| Numerator | WHO Defined Daily Dose (DDD) count for dispensed intravenous antibiotic formulations |
| Numerator unit of measure | Defined Daily Doses (DDDs) |
| Denominator | Hospital admissions for the month reported |
| Denominator unit of measure | Inpatient hospital admissions (excluding day cases) |
| Hyperlinks to supporting information | [Public Health Profiles (Fingertips) - Intravenous antibiotic prescribing](https://fingertips.phe.org.uk/search/intravenous#page/4/gid/1/pat/159/par/K02000001/ati/15/are/E92000001/iid/93983/age/1/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1)  [Antimicrobial intravenous-to-oral switch: criteria for prompt switch - GOV.UK (www.gov.uk)](https://www.gov.uk/government/publications/antimicrobial-intravenous-to-oral-switch-criteria-for-early-switch)  [Public Health Profiles (Fingertips) - AMR local indicators](https://fingertips.phe.org.uk/profile/amr-local-indicators/data#page/3/gid/1938133070/pat/15/par/E92000001/ati/118/are/R1H/iid/93983/age/1/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1/page-options/car-do-0) |

Continued overleaf

|  |  |
| --- | --- |
| Notes | Drugs are only included in the numerator if they have a British National Formulae (BNF) 5.1 code and Defined Daily Dose (DDD) values provided by the World Health Organization. Anti-TB, Anti-Parasitic and topical antibiotics are excluded to align with requirements for the NHS Standard Contract and previous NHS England antibiotic resistance CQUINs.  Admissions data retrieved from hospital episode statistics (HES) supplied by NHS digital. Provisional admissions data are used for each quarter to be more representative of Trust activity. As a result, quarterly data will be updated 4 months after the end of the quarter to account for the lag in HES admissions data quality and allow for more accurate reporting. Admissions data will be updated as finalised data becomes available.  The figures produced in this indicator are raw and unadjusted for the confounding effects of both the age and sex mix of patient populations served by hospitals, or for other factors such as deprivation and complexity of care that can drive hospital antibiotic prescribing. Therefore Trusts may appear outliers for this measure by fulfilling valid care of the specific population that they serve. Further consideration is required to adapt antibiotic prescribing metrics for use in specialist healthcare settings, including an improved understanding of case-mix. However, until data from routine electronic prescribing of antibiotics is available nationally, there is limited work that can be performed in this area. For these reasons comparison between different organisations should be treated with caution. Nonetheless, as NHS national quality improvement schemes require each hospital to improve from its own baseline levels this is consistent with improving the quality of antibiotic prescribing in each hospital. |
| Medicine Group Definitions | Drugs are only included in the numerator if they have a British National Formulae (BNF) 5.1 code and Defined Daily Dose (DDD) values provided by the World Health Organization. |
| Other inclusion or exclusion criteria: | Anti-TB, Anti-Parasitic and topical antibiotics are excluded to align with requirements for the NHS Standard Contract and previous NHS England antibiotic resistance CQUINs. |

# Appendix 1: Medicine group details

#### Medicine group details for Metric 11.Carbon emissions from inhalers

Only products with a pharmaceutical form of: inhalation powder, inhalation solution, or, pressurised inhalation are included where they are included in the following BNF Chemical Substances:

|  |  |
| --- | --- |
| **BNF Chemical Substance Code** | **BNF Chemical Substance** |
| 0301011AB | Beclometdiprop/formoterol/glycopyrronium |
| 0301011E0 | Formoterol fumarate |
| 0301011F0 | Fenoterol hydrobromide |
| 0301011R0 | Salbutamol |
| 0301011U0 | Salmeterol |
| 0301011V0 | Terbutaline sulphate |
| 0301011X0 | Indacaterol maleate |
| 0301011Z0 | Olodaterol |
| 0301020I0 | Ipratropium bromide |
| 0301020P0 | Oxitropium bromide |
| 0301020Q0 | Tiotropium bromide |
| 0301020R0 | Aclidinium bromide |
| 0301020S0 | Glycopyrronium bromide |
| 0301020T0 | Umeclidinium bromide |
| 0301040AA | Glycopyrronium/formoterol |
| 0301040M0 | Fenoterol hydrobromide |
| 0301040R0 | Salbutamol |
| 0301040V0 | Aclidinium bromide/formoterol |
| 0301040W0 | Umeclidinium bromide/vilanterol |
| 0301040X0 | Tiotropium bromide/olodaterol |
| 0301040Y0 | Indacaterol/glycopyrronium |
| 0302000C0 | Beclometasone dipropionate |
| 0302000K0 | Budesonide |
| 0302000N0 | Fluticasone propionate (Inhalation) |
| 0302000R0 | Mometasone furoate |
| 0302000U0 | Ciclesonide |
| 0302000V0 | Fluticasone furoate/vilanterol |
| 0302000W0 | Mometasone/glycopyrronium/indacaterol |
| 0302000X0 | Indacaterol/mometasone |
| 0302000Y0 | Formoterol/glycopyrronium/budesonide |
| 0303010J0 | Nedocromil sodium |
| 0303010Q0 | Sodium cromoglicate |

One of the following six methods has been used to assign emissions factors to each type of inhaler:

* Based on NHSE Greener NHS Value (emissions factor available)
* Value for generic prescription items is based on a single brand for which estimates are available.
* Based on 17,335g CO2e assumption for MDI inhalers – average for all MDI inhalers for which an Emissions Factor was available
* Based on 730g CO2e assumption for DPI inhalers - average for all DPI inhalers for which an emissions factor was available
* Value for generic is based on midpoint for brands for which estimates are available, device type average was not within the range of the available estimates so was not considered plausible.
* No assumption applied; zero emissions included

The average emissions factors for each device type (MDI or DPI) are based on weighted averages of the number of inhalers prescribed by English GP Practices from April 2022 to March 2023. Weighted averages include only prescription items for which NHSE Greener NHS emissions factors were available.  
  
The attached CSV file includes the emission factors that were ‘available’ (from NHSE Greener NHS assumptions) and those that were assumed along with an indication of which of the methods described above applies to each type of inhaler.  
  


#### Medicine group details for Metric 15.Opioid use

See presentations flagged as PAIN03\_FLAG = ‘Y’ for those included in the oral or transdermal opioids group. Other presentations from other common opioid groupings are also included for comparison.



# Appendix 2: Governance and support

This dashboard is aligned with the following policy framework: [NHS England » National medicines optimisation opportunities 2023/24](https://www.england.nhs.uk/long-read/national-medicines-optimisation-opportunities-2023-24/), authored by the NHS England medicines policy and strategy unit. Questions about the opportunities or can be sent to [england.medicines@nhs.net](mailto:england.medicines@nhs.net).

Queries regarding any technical aspects or support can be sent to [DataServicesSupport@nhsbsa.nhs.uk](mailto:DataServicesSupport@nhsbsa.nhs.uk).

This document was last updated 2024-09-01 and information may not reflect changes after that point.  
This document will be reviewed and updated periodically.