**Specification for the Opioid Prescribing**

**Comparators Dashboard**

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# Background

This set of comparators has been developed following publication by the Public Health England (PHE) Prescribed Medicines Review[[1]](#footnote-2) (Hereafter referred to as the “PMR”.)

In the report published by PHE in September 2019, analysis showed that in 2017-2018, 11.5 million adults in England (26% of the adult population) received and had dispensed one or more prescriptions for antidepressants, opioid pain medicines, gabapentinoids, benzodiazepines or “z” drugs.

5.6 million people (13% of the population) received and had dispensed a prescription for an opioid pain medicine.

In response to this report, work is being done to address this and Wessex AHSN and the NHS BSA have worked together with clinicians to develop the NHS BSA Opioid Prescribing Comparators to help GP practices, PCNs, ICS and others to

* understand the scale of their local opioid issues,
* understand which areas of opioid prescribing are most problematic locally
* identify patients who are deemed to be at greatest risk from harm to be prioritised for a structured medication review.
* measure the impact of any interventions aimed at reducing harm from opioids.

<https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/940255/PHE_PMR_report_Dec2020.pdf>

This specification is a technical document aimed at setting out how each of the Opioid prescribing comparators has been developed.

**THIS IS NOT A PRESCRIBING GUIDELINE. However, the following advice has been issued by the MHRA**

# Advice for healthcare professionals:

* opioid medicines (opioids) provide relief from serious short-term pain; however long- term use in non-cancer pain (longer than 3 months) carries an increased risk of dependence and addiction
* discuss with patients that prolonged use of opioids may lead to drug dependence and addiction, even at therapeutic doses – warnings have been added to the labels (packaging) of UK opioid medicines to support patient awareness
* before starting treatment with opioids, agree with the patient a treatment strategy and plan for end of treatment
* explain the risks of tolerance and potentially fatal unintentional overdose, and counsel patients and caregivers on signs and symptoms of opioid overdose to be aware of (see opioids safety information leaflet)
* provide regular monitoring and support especially to individuals at increased risk, such as those with current or past history of substance use disorder (including alcohol misuse) or mental health disorder
* at the end of treatment, taper dosage slowly to reduce the risk of withdrawal effects associated with sudden cessation of opioids; tapering from a high dose may take weeks or months
* consider the possibility of hyperalgesia if a patient on long-term opioid therapy presents with increased sensitivity to pain
* consult the latest advice and warnings for opioids during pregnancy in the product information and in clinical resources
* report suspected dependence or addiction to any medicine, including to an opioid, via the Yellow Card scheme

**THIS IS NOT A CLINICAL OR PRESCRIBING GUIDELINE**

**FOR FURTHER SUPPORT AROUND SAFER OPIOID PRESCIRBING SEE**

[**https://fpm.ac.uk/opioids-aware-opioids-addiction/terminology-and-prevalence**](https://fpm.ac.uk/opioids-aware-opioids-addiction/terminology-and-prevalence)

# Drug groupings

The PMR identified five medicine classes. These are referred to using the following terminology in the report and datasets. Three additional classes have been included for the purpose of calculating additional comparators suggested by the working groups.

|  |  |  |
| --- | --- | --- |
| PMR Medicine Class | Detailed Medicine sub class | Details |
| Antidepressants |  | Appendix 1 section 1 |
| Opioid pain medicines |  | Appendix 1 section 2 |
|  | Overall opioid pain medicines (PMR) | Appendix 1 section 2.1 |
|  | Opioid pain medicines (excluding injectables and co-codamol and codydramol) | Appendix 1 section 2.2 |
|  | Oral Morphine Equivalence | Appendix 1 section 2.3 |
|  | Morphine sulfate 10mg/5ml | See comparator specification |
| Gabapentinoids |  | Appendix 1 section 3 |
| Benzodiazepines |  | Appendix 1 section 4 |
| Z-Drugs |  | Appendix 1 section 5 |

Detailed lists by British National Formulary (BNF) code and the methodology used to select the lists can be found in the technical annex to this report. The BNF codes used in NHSBSA prescribing data use the classification system that was in place before BNF edition 70.

# Oral Morphine Equivalence

There is no recognised, definitive list of oral morphine equivalence for all opioid preparations. The Opioid comparators working group are enormously grateful to Amy Lynch Strategic Lead Pharmacist for Medicines Sussex NHS and Professor Roger Knaggs Associate Professor Faculty of Science, The University of Nottingham, for their invaluable work in developing our oral morphine equivalence values which can be seen in Appendix 1 Section 2.3

Oral morphine equivalent (OME) values have been used to calculate the total volume of opiates prescribed to any patient in milligrams of oral morphine equivalent (mge). NHS BSA does not hold data on the dose or duration of prescriptions so the dashboard is based on the total volume prescribed to a patient over a period of time.

The OME values are set for each of the most commonly prescribed pharmaceutical presentations, and were based on the following sources: British National Formulary, Centres for Medicare & Medicaid, Services, GP Notebook, Monthly Index of Medical Specialities, Opioids Aware, Aneurin Bevan Health Board

The details and source references used for each presentation are described in the Appendix 1 section 2.3.

The OME values **do not** include: injectables, Fentanyl presentations other than transdermal patches (i.e. Buccal film, Buccal tablet, Lozenge, Spray, Sublingual tables) and several other rare presentations or those with currently discontinued packs.

The OME values presented in the annex include values for some medicines primarily classified in BNF section 4.7.1 as ‘Non-opioid analgesics and compound analgesic preparations’, such as co-codamol and co-dydramol. For comparators specified as Opioid Pain Medicines (PMR) these medicines are used to identify patients being prescribed opioids. For comparators specified as Opioid pain medicines (excluding injectables and co-codamol and codydramol) these medicines are not used to identify those being prescribed opioid pain medicines but they are added to the total OME value for the patient. So they may contribute to a patient being included in a ‘high OME volume’ comparator.

In some cases, notably Buprenorphine transdermal patches, the OME value can vary by brand. This reflects the recommended time between replacement of patches. In these cases, a relatively high proportion of prescriptions do specify the brand enabling a more accurate OME to be calculated. But many prescriptions are recorded generically; in these cases the generic OME value specified in Appendix 1 Section 2.3 is used as an approximation; the actual product dispensed and the recommended duration is not stored in our data.

# Opioids for Cancer

Note that NHSBSA data cannot be filtered to exclude patients diagnosed with cancer and who are using an opioid to manage the pain that can be associated with malignant diseases, especially as part of end of life care. This means that some comparators, notably opioid pain medicines include more patients than the PMR analysis. The PMR estimated this proportion to be in the range of 8-9% of patients receiving one or more opioid prescription between April 2015 and March 2018[[2]](#footnote-3).Therefore, all those using the comparators to select patients for a structured medication review will need to triage the list of patients to exclude those using opioids for the management of cancer pain.

# Prescribing data

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
* Items prescribed for instalment dispensing that is those using ‘FP10MDA’ forms

# Identified patients

* Patient counts are based on NHS numbers read from EPS messages or scanned from paper forms. These have not been subject verification by the NHS Patient Demographics Service and may therefore include inaccurate or mis-scanned NHS numbers
* Information will be produced anonymously without any identifiable information being included – and a risk assessment will be conducted to establish whether the re-identification risk warrants further disclosure control.
* Organisations with direct clinical care for a patient who see information of concern, may request the underlying NHS Numbers for any comparators. In so doing they can compare records to clinical systems and conduct case review. This will also provide them with an opportunity to resolve any spurious NHS numbers generated during the scanning process.
* See Section 8 for analysis of patient identification rates at the time of development of the prototype comparators.

# NHS structure

Patients are reported against a single practice in any reporting period to allow aggregation and to provide a comprehensive view of their prescriptions:

* Where possible each patient is reported against the most recent registered practice from data available to the NHS BSA data warehouse at the time of reporting. This may be from the most recent Electronic Prescribing System (EPS) message received for a patient, or the most recent update from the NHS Personal Demographics Service (PDS). Where no registered practice information is found the latest organisation to have issued a prescription to the patient is used. This may result in some patients being allocated to non-GP practices and excluded from the dashboard until such time as registered practice information becomes known to NHS BSA.
* This means that the data reported against a single GP practice may include data relating to prescriptions from other organisations such as a previous practice or non-GP organisations.
* Any higher NHS organisation structure can be derived via that practice:
  + Primary Care Network (PCN) – based on the latest data received by NHSBSA from NHS-Digital at the time of calculation
  + Integrated Care Board (ICB) and Sub Integrated Care Board Location (SICBL)
  + Academic Health Science Network (AHSN)
  + Region
  + National
  + As PCNs can have a different reporting CCG to that of the practice, CCG will be specified either:
    - CCG: linked to the practice
    - PCN\_CCG: linked to the CCG

# Other breakdowns

Other breakdowns are available for some comparators on the following basis:

* **Age** – age is reported as a single age for the patient in each reporting period, for each month. This will be based on their age at the end of the month so that it should correspond with list size data published by NHS Digital. Patient age is based:
  + on the most recent EPS message, or,
  + if that is not available the most recent information that we hold from NHS Personal demographics service, or,
  + if that is not available, the maximum age associated with the prescription using the ePACT2 methodology[[3]](#footnote-4).
* **Gender** – breakdown by male and female is shown in the dashboards. Patient counts for unknown or unspecified Gender are not included due to low numbers.

# Snapshot and Trend Views

The comparators are presented in two views:

* **Opioid Prescribing Comparators (Snapshot)**

This view shows Electronic Prescribing System (EPS) data as soon as possible after dispensers have submitted a reimbursement claim for a prescription item to NHSBSA.

* **Opioid Prescribing Comparators (Trend)**

This view shows validated prescription reimbursement information reported after being processed by NHSBSA Prescription Services for reimbursement. This includes paper prescriptions and historical data to show trends over time. This is based on the data normally available via ePACT2.

### Snapshot View

The snapshot view shows Electronic Prescribing System (EPS) data as soon as possible after dispensers have submitted a reimbursement claim for a prescription item to NHSBSA. These comparators provide more timely indicators of prescribing and dispensing than processed prescription data.

EPS data is based on prescriptions for which claims have been submitted via the EPS system following dispensing. The EPS data used has not been processed by NHSBSA prescription services so may be subject to change either due to resubmission by a dispenser or validation of the data performed as part of the prescription processing.

All comparators are based on those with prescribing in the 28 day period leading up to the latest data refresh. Some comparators use older data to establish prescribing history. Timings for EPS comparators are based on the date that the message was claimed.

* The EPS comparators are based on EPS messages only. This represents around 91% of the total number of prescription items.
* EPS data may be refreshed frequently, and no historical data is provided. So, figures in reports may be updated from day to day.
* The data includes acute and repeat items.
* The prescribing data used in these comparators does not include hospital prescribing. Therefore, medicines supplied through home care or by the hospital pharmacy, such as oncology treatments or any specialised medicines, are not included.

### Trend View

These views are currently under development and there are a few other technical limitations that are described within the pages themselves. More comparators and content will be added to these over time.

The processed prescription data views include all processed prescriptions submitted to NHSBSA for reimbursement on paper or via EPS. These views include historical data and are refreshed along with the latest data available through ePACT2. This is intended to show changes over time.

# Guiding principles

Based on the previous work on the polypharmacy prescribing comparators, the Opioids data group worked to three key guiding principles;

1. Keep it simple

2. Keep the end user in mind at all times

3. Must follow best evidence base where available.

# Comparator Specifications

Please note as new comparators are developed and added to the dashboard more information may be added here. The specifications differ depending on the data used and are grouped in presentations

# Snapshot comparators

## OP01 Overall Opioid comparator – EPS Snapshot

|  |  |
| --- | --- |
| Title | Patients receiving opioid pain medicines |
| Description | The number of patients receiving any opioid as a proportion of the total number of patients |
| Numerator | Number of patients (by age and gender) receiving one or more item of opioid pain medicines (excluding injectables and co-codamol and codydramol) see appendix 1 section 2.2 |
| Denominator | Total number of patients (list size) |
| Rationale | This provides general context for the rest of the comparators.  Allows ICS, PCN or GP practice to benchmark their overall opioid prescribing against similar organisation or other in their area, AHSN region or in England.  See the PMR report for rationale and comments and detailed evidence and analysis. i |

## OP02 Opioids by duration - EPS Snapshot

|  |  |
| --- | --- |
| Title | Patients receiving opioid pain medicines by duration |
| Description | Short, medium and long term use of opioids as a proportion of all patients |
| Numerator | Number of patients (by age and gender) prescribed one or more prescription of Opioid pain medicines (excluding injectables and co-codamol and codydramol) list dispensed in the most recent 4-week (28 day) period grouped into the following three duration groups:   * Dispensed opioids in the previous 28 days but **not** dispensed opioids from day 85 to day 252 before that (they may or may not have been dispensed opioids in days 29 to 84) * Dispensed opioids in the previous 28 days, and dispensed opioids between day 85 to 168 before that   but were **not** dispensed opioids from day 169 to 252 before that  (they may or may not have been dispensed opioids in days 29 to 84)   * Dispensed opioids in the previous 28 days,   and between day 169 and day 252 before that  (they may or may not have been dispensed opioids in days 29 to 168)  See Appendix 1 section 2.2 for the list of presentations |
| Denominator | Total number of patients (list size) |
| Rationale /Comments | MHRA/CHM issued new recommendations following a review of the risk of dependence and addictions associated with prolonged use (longer than 3 months) of opioids for non-malignant pain  Based on work by PHE and NHSE who analysed 5 years of data (provided quarter by quarter) to create a model to be able to calculate the probability of patients staying on the opioid (in the next quarter) based on how long they have been on them. Results as follows –  At end of quarter 1 – 27% chance of the patient continuing on opioids  At end of quarter 2 – 54% chance of the patient continuing on opioids  At end of quarter 3 – 79% chance of the patient continuing on opioids  At end of quarter 4 – 90% chance of the patient continuing on opioids. |

## OP03 Opioids in combination with other medicines known to increase the risk of harm - EPS Snapshot

|  |  |
| --- | --- |
| Title | Patients receiving opioid pain medicines in combination with other medicines known to increase the risk of harm |
| Description | Use of multiple dependency forming medicines |
| Numerator | Number of patients with a prescription for Opioid pain medicines (excluding injectables and co-codamol and codydramol) in the latest 28 day period (by age and gender, and duration group as described in comparator OP02) who have also received one or more prescription in the latest 28 day period from either of the following groups: Antidepressants, Benzodiazepines, Gabapentinoids and Z-Drugs  See appendix 1 section 2.2 for the list of presentations used to identify the opioid population, and sections 1,3,4,5 for the other medicine classes. |
| Denominator | Number of patients with any prescription for Opioid pain medicines (excluding injectables and co-codamol and codydramol) in the latest 28 day period |
| Rationale /Comments | The MHRA has reminded health care professionals that opioids co -prescribed with benzodiazepines and benzodiazepine like drugs can produce additive CNS depressant effects, thereby increasing the risk of sedation, respiratory depression, coma and death. Healthcare professionals are advised to only co prescribe if there is no alternative and, if necessary, the lowest possible doses should be given and for the shortest duration  In general information on the other combinations can be analysed find considered.  Additional information by practice of number with distinct chemical substance count by class.  Higher doses of opioids are associated with an increased risk of overdose and death.  The WHO highlights high prescribed doses of opioids (more than 100mg of morphine or equivalent) as a risk factor for opioid overdose  <https://www.who.int/news-room/fact-sheets/detail/opioid-overdose>  The faculty of Pan Medicine advises that the risk of harm increases substantially at doses above an oral morphine equivalent of 120mg/day, but there is no increased benefit: tapering or stopping high dose opioids needs careful planning and collaboration.  <https://www.fpm.ac.uk/opioids-aware> |

## OP04 High Oral Morphine Equivalent volume of opioids - EPS Snapshot

|  |  |
| --- | --- |
| Title | Number of patients receiving High Oral Morphine Equivalent volume of opioids in the latest 28 day period and any dose of opioids for less than 3 months, 3-6 months and 6+ months |
| Description | Prescription of high equivalent volume of opioids |
| Numerator | Number of patients with a prescription for Opioid pain medicines (excluding injectables and co-codamol and codydramol) in the latest 28 day period (by age and gender, and duration group as described in comparator OP02)  **and** who have also received total oral morphine equivalent volume of 120mg or more per day in the latest 28 day period  See appendix 1 section 2.2 for the qualification for opioid pain medicines population, section 2.3 for OME values. |
| Denominator | Number of patients with any prescription for Opioid pain medicines (excluding injectables and co-codamol and codydramol) in the latest 28 day period from the same duration group. |
| Rationale /Comments | Higher doses of opioids are associated with an increased risk of overdose and death.  NHS BSA data does not  The WHO highlights high prescribed doses of opioids (more than 100mg of morphine or equivalent) as a risk factor for opioid overdose  <https://www.who.int/news-room/fact-sheets/detail/opioid-overdose>  The faculty of Pan Medicine advises that the risk of harm increases substantially at doses above an oral morphine equivalent of 120mg/day, but there is no increased benefit: tapering or stopping high dose opioids needs careful planning and collaboration.  <https://www.fpm.ac.uk/opioids-aware> |

## OP05 High Oral Morphine Equivalent volume in combination with other medicines known to increase risk of harm - EPS Snapshot

|  |  |
| --- | --- |
| Title | High Oral Morphine Equivalent volume of opioids in combination with other medicines known to increase the risk of harm |
| Description | Prescription of high equivalent volume of opioids in combination with other medicines known to increase the risk of harm |
| Numerator | Number of patients with a prescription for Opioid pain medicines (excluding injectables and co-codamol and codydramol) in the latest 28 day period (by age and gender, and duration group as described in comparator OP02)  **and** who have also received total oral morphine equivalent of 120mg per day in the latest 28 day period  **and** who have also received one or more prescription in the latest 28 day period from either of the following groups: Antidepressants, Benzodiazepines, Gabapentinoids and Z-Drugs  See appendix 1 section 2.2 for the qualification for opioid pain medicines population, section 2.3 for OME values, and sections 1,3,4,5 for other medicine classes. |
| Denominator | No denominator – number of patients only |
| Rationale /Comments | The MHRA has reminded health care professionals that opioids co -prescribed with benzodiazepines and benzodiazepine like drugs can produce additive CNS depressant effects, thereby increasing the risk of sedation, respiratory depression, coma and death. Healthcare professionals are advised to only co prescribe if there is no alternative and, if necessary, the lowest possible doses should be given and for the shortest duration  Specific combinations with Benzodiazepines and Gabapentinoids were raised by the working group – note similar comparators to these are already available in the Safer management of controlled drugs dashboard.  In general information on the other combinations can be analysed find considered.  Additional information by practice of number with distinct chemical substance count by class.  Higher doses of opioids are associated with an increased risk of overdose and death.  The WHO highlights high prescribed doses of opioids (more than 100mg of morphine or equivalent) as a risk factor for opioid overdose  <https://www.who.int/news-room/fact-sheets/detail/opioid-overdose>  The faculty of Pan Medicine advises that the risk of harm increases substantially at doses above an oral morphine equivalent of 120mg/day, but there is no increased benefit: tapering or stopping high dose opioids needs careful planning and collaboration.  <https://www.fpm.ac.uk/opioids-aware> |

## OP06 Multiple items of Morphine sulfate 10mg/5ml oral solution – EPS Snapshot

|  |  |
| --- | --- |
| Title | Multiple prescriptions for Morphine sulfate 10mg/5ml oral solution |
| Description | Patients prescribed Morphine sulfate 10mg/5ml oral solution by number of items: |
| Numerator | Number of patients (all ages, by age group, by IMD, by LSOA) prescribed two or more items of Morphine sulfate 10mg/5ml dispensed in the most recent 28 day period  Includes all presentations classified under the Generic BNF Code 0407020Q0AACNCN |
| Denominator | Number of patients prescribed one or more items of Morphine sulfate 10mg/5ml in the same month. |
| Rationale /Comments | Where patients are not at risk of opioid overdose (intentional or unintentional), and especially where end of life patients have swallowing difficulties, morphine sulfate 10 mg/5 mL oral solution can be a useful medicine to manage breakthrough pain. However, when used long term for patients with chronic pain, this can cause problems. A prescription for morphine sulfate 10 mg/5 mL oral solution 5-10ml 4 times a day could add up to 80mg morphine daily, compared with tramadol 50mg 2 qds being equivalent to 60mg morphine daily, and co-codamol 30/500 2 qds equivalent to 24mg morphine daily.  Despite a 300ml bottle of morphine sulfate 10 mg/5 mL oral solution containing the same amount of morphine as 60 Zomorph 10mg capsules, it is legally classed as a Schedule 5 rather than as a Schedule 2 CD and so is effectively treated as a POM. This may give prescribers the impression that it is a less dangerous medicine than the morphine solid dose forms, in terms of patient safety and risks of misuse and diversion. However, the following incidents show how much of a risk morphine sulfate oral solution presents.   * Morphine sulfate oral solution is a risky analgesic option for patients with a history of mental illness, self-harm, or personality disorder. For an opioid naïve patient, 100ml of morphine sulfate 10 mg/5 mL oral solution (200mg morphine) can be a fatal dose – especially if they are already taking other CNS depressant medicines like diazepam, zopiclone or SSRIs. * Placing morphine sulfate oral solution on repeat or prescribing quantities of 300ml can make it easy for patients to escalate their dose. 100ml as an acute script should be enough for occasional use. * Consider the risks of prescribing opioids as an oral solution – patients are prone to swig out of the bottle, and may unintentionally be taking large doses. If opioids are needed for occasional pain, would a small quantity of immediate release morphine tablets for breakthrough/occasional pain be safer, e.g., Morphine sulfate tablets such as Sevredol? * Consider the risks of respiratory depression when prescribing analgesia for patients with underlying risk factors, e.g., COPD, heart failure, especially if they are already taking other CNS depressant medicines. For many older patients the risks of NSAIDs for chronic pain will be less than the risks of taking opioids. Oramorph® is often the target of people seeking prescription medicines for misuse or diversion – if you are suspicious of any prescription requests, please inform the local NHS England CD Accountable Officer.   Ref https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2018/06/nhse-cd-newsletter-ssw-aug16B.pdf |

## OP07 High volume of Morphine sulfate 10mg/5ml oral solution – EPS Snapshot

|  |  |
| --- | --- |
| Title | High total volume of prescriptions for Morphine sulfate 10mg/5ml oral solution |
| Description | Patients prescribed items of Morphine sulfate 10mg/5ml oral solution by total monthly quantity: GENERIC\_BNF\_CODE of 0407020Q0AACNCN. |
| Numerator | Number of patients (all ages, by age group, by IMD, by LSOA) prescribed 601ml or more of Morphine sulfate 10mg/5ml dispensed in the most recent 28 day period  Includes all presentations classified under the Generic BNF Code 0407020Q0AACNCN |
| Denominator | Number of patients prescribed one or more items of Morphine sulfate 10mg/5ml in the same month. |
| Rationale /Comments | Additional information presented by practice giving the number of patients prescribed total quantity of Morphine sulfate 10mg/5ml oral solution in the following ranges 1-300, 301-600, 601-1000, 1001 or more within the reporting month.  Where patients are not at risk of opioid overdose (intentional or unintentional), and especially where end of life patients have swallowing difficulties, morphine sulfate 10 mg/5 mL oral solution can be a useful medicine to manage breakthrough pain. However, when used long term for patients with chronic pain, this can cause problems. A prescription for morphine sulfate 10 mg/5 mL oral solution 5-10ml 4 times a day could add up to 80mg morphine daily, compared with tramadol 50mg 2 qds being equivalent to 60mg morphine daily, and co-codamol 30/500 2 qds equivalent to 24mg morphine daily.  Despite a 300ml bottle of morphine sulfate 10 mg/5 mL oral solution containing the same amount of morphine as 60 Zomorph 10mg capsules, it is legally classed as a Schedule 5 rather than as a Schedule 2 CD and so is effectively treated as a POM. This may give prescribers the impression that it is a less dangerous medicine than the morphine solid dose forms, in terms of patient safety and risks of misuse and diversion. However, the following incidents show how much of a risk morphine sulfate oral solution presents.   * Morphine sulfate oral solution is a risky analgesic option for patients with a history of mental illness, self-harm, or personality disorder. For an opioid naïve patient, 100ml of morphine sulfate 10 mg/5 mL oral solution (200mg morphine) can be a fatal dose – especially if they are already taking other CNS depressant medicines like diazepam, zopiclone or SSRIs. * Placing morphine sulfate oral solution on repeat or prescribing quantities of 300ml can make it easy for patients to escalate their dose. 100ml as an acute script should be enough for occasional use. * Consider the risks of prescribing opioids as an oral solution – patients are prone to swig out of the bottle, and may unintentionally be taking large doses. If opioids are needed for occasional pain, would a small quantity of immediate release morphine tablets for breakthrough/occasional pain be safer, e.g., Morphine sulfate tablets such as Sevredol? * Consider the risks of respiratory depression when prescribing analgesia for patients with underlying risk factors, e.g., COPD, heart failure, especially if they are already taking other CNS depressant medicines. For many older patients the risks of NSAIDs for chronic pain will be less than the risks of taking opioids. Oramorph® is often the target of people seeking prescription medicines for misuse or diversion – if you are suspicious of any prescription requests, please inform the local NHS England CD Accountable Officer.   Ref https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2018/06/nhse-cd-newsletter-ssw-aug16B.pdf  Higher doses of opioids are associated with an increased risk of overdose and death.  The WHO highlights high prescribed doses of opioids (more than 100mg of morphine or equivalent) as a risk factor for opioid overdose  <https://www.who.int/news-room/fact-sheets/detail/opioid-overdose>  The faculty of Pan Medicine advises that the risk of harm increases substantially at doses above an oral morphine equivalent of 120mg/day, but there is no increased benefit: tapering or stopping high dose opioids needs careful planning and collaboration.  <https://www.fpm.ac.uk/opioids-aware> |

# Trend comparators

## OP01 Overall Opioid comparator – validated trend data

|  |  |
| --- | --- |
| Title | Patients receiving opioid pain medicines |
| Description | The number of patients receiving any opioid as a proportion of the total number of patients |
| Numerator | Number of patients (by age and gender) receiving one or more item of opioid pain medicines (excluding injectables and co-codamol and codydramol) see appendix 1 section 2.2 |
| Denominator | Total number of patients (list size) |
| Rationale | This provides general context for the rest of the comparators.  Allows ICS, PCN or GP practice to benchmark their overall opioid prescribing against similar organisation or other in their area, AHSN region or in England.  See the PMR report for rationale and comments and detailed evidence and analysis. i |

## OP02 Opioids by duration – validated trend data

|  |  |
| --- | --- |
| Title | Patients receiving opioid pain medicines by duration |
| Description | Short, medium and long term use of opioids as a proportion of all patients |
| Numerator | Number of patients (all ages, by age group and gender) prescribed one or more prescription item from the opioids list in the reporting month and grouped into one of the following three sequences:   * Prescribing for opioids in the reporting month   AND no prescribing for opioids between 4 and 9 months ago  (they may or may not have had prescribing for opioids in month 2 and 3)   * Prescribing for opioids in the reporting month   AND prescribing for opioids between 4 and 6 months ago  AND no prescribing for opioids between 7 and 9 months ago  (they may or may not have had prescribing for opioids in month 2 and 3)   * Prescribing for opioids in the reporting month   AND prescribing for opioids between 7 and 9 months ago  (they may or may not have had prescribing for opioids in month 2 to 6)  See Appendix 1 section 2.2 for the list of presentations |
| Denominator | Total number of patients (list size) |
| Rationale /Comments | MHRA/CHM issued new recommendations following a review of the risk of dependence and addictions associated with prolonged use (longer than 3 months) of opioids for non-malignant pain  Based on work by PHE and NHSE who analysed 5 years of data (provided quarter by quarter) to create a model to be able to calculate the probability of patients staying on the opioid (in the next quarter) based on how long they have been on them. Results as follows –  At end of quarter 1 – 27% chance of the patient continuing on opioids  At end of quarter 2 – 54% chance of the patient continuing on opioids  At end of quarter 3 – 79% chance of the patient continuing on opioids  At end of quarter 4 – 90% chance of the patient continuing on opioids. |

## OP04 High Oral Morphine Equivalent volume of opioids – validated trend data

|  |  |
| --- | --- |
| Title | Number of patients receiving High Oral Morphine Equivalent volume of opioids in the latest month and any dose of opioids for less than 3 months, 3-6 months and 6+ months |
| Description | Prescription of high equivalent volume of opioids |
| Numerator | Number of patients with a prescription for Opioid pain medicines (excluding injectables and co-codamol and codydramol) in the latest month (by age and gender, and duration group as described in comparator OP02)  **and** who have also received total oral morphine equivalent volume of 120mg or more per day - taken to be 3,360mge or more in total - in the latest month  See appendix 1 section 2.2 for the qualification for opioid pain medicines population, section 2.3 for OME values. |
| Denominator | Number of patients with any prescription for Opioid pain medicines (excluding injectables and co-codamol and codydramol) in the latest month from the same duration group. |
| Rationale /Comments | See above under OP04 EPS Snapshot |

## OP06 Multiple items of Morphine sulfate 10mg/5ml oral solution – validated trend data

|  |  |
| --- | --- |
| Title | Multiple prescriptions for Morphine sulfate 10mg/5ml oral solution |
| Description | Patients prescribed Morphine sulfate 10mg/5ml oral solution by number of items: |
| Numerator | Number of patients (all ages, by age group, by IMD, by LSOA) prescribed two or more items of Morphine sulfate 10mg/5ml dispensed in the latest month  Includes all presentations classified under the Generic BNF Code 0407020Q0AACNCN |
| Denominator | Number of patients prescribed one or more items of Morphine sulfate 10mg/5ml in the same month. |
| Rationale /Comments | See above under OP07 EPS Snapshot |

## OP07 High volume of Morphine sulfate 10mg/5ml oral solution – validated trend data

|  |  |
| --- | --- |
| Title | High total volume of prescriptions for Morphine sulfate 10mg/5ml oral solution |
| Description | Patients prescribed items of Morphine sulfate 10mg/5ml oral solution by total monthly quantity: GENERIC\_BNF\_CODE of 0407020Q0AACNCN. |
| Numerator | Number of patients (all ages, by age group, by IMD, by LSOA) prescribed 601ml or more of Morphine sulfate 10mg/5ml dispensed in the latest month  Includes all presentations classified under the Generic BNF Code 0407020Q0AACNCN |
| Denominator | Number of patients prescribed one or more items of Morphine sulfate 10mg/5ml in the same month. |
| Rationale /Comments | See above under OP07 EPS Snapshot |

## PMR01: Prescribing rates for dependency and withdrawal forming medicines

|  |  |
| --- | --- |
| Title | Patients receiving dependency and withdrawal forming medicines, by medicine class |
| Description | Prescribing rates those with one or more prescription for dependency and withdrawal forming medicines in the reporting month from each PMR medicine class:   1. Antidepressants (PMR) 2. Opioid pain medicines (PMR – includes compound analgesics) 3. Gabapentinoids (PMR) 4. Benzodiazepines (PMR) 5. Z-Drugs (PMR)   This comparator is also available for the narrower definition of opioids  Opioid (excluding injectable, Co-codamol, Co-dydramol)  See appendix1 section 2.1 for definitions of the PMR medicine classes. |
| Numerator | 5 separate comparators for each PMR medicines class that is the number of patients prescribed one or more prescription item from the PMR medicine class in the same reporting period. |
| Denominator | Total number of patients (list size) |
| Rationale /Comments | **This comparator is based on the recommendation of the Prescribed Medicines Review (PMR) with a few adjustments for consistency and practicality described here. It has not been developed by the Opioid prescribing Comparators working group.**  See the PMR report for rationale and comments and detailed evidence and analysis. i  In line with the Public Health England Prescribed Medicines Reviewi, the ISRs and confidence intervals can be calculated using the methodology described in Association of Public Health Observatories’ Technical Briefing 3.[[4]](#endnote-2)  For simplicity and consistency data has been presented using a simple patient count numerator instead of an Individually Standardised Rate presented in the PMR. The dashboard enables analysis by specific demographic segments.. |

## PMR02: Patients receiving selected dependency and withdrawal forming medicines for 12 months

|  |  |
| --- | --- |
| Title | Patients receiving selected dependency and withdrawal forming medicines for 12 months, for each medicine class |
| Description | Proportion of patients with 12 months of prescribing for each medicine class:   1. Antidepressants (PMR) 2. Opioid pain medicines (PMR – includes compound analgesics) 3. Gabapentinoids (PMR) 4. Benzodiazepines (PMR) 5. Z-Drugs (PMR)   This comparator is also available for the narrower definition of opioids  Opioid (excluding injectable, Co-codamol, Co-dydramol)  See appendix1 section 2.4 for definitions of the PMR medicine classes. |
| Numerator | Number of patients by age group and gender prescribed one or more prescription item from the selected medicine class in the reporting month who also received a sequence of one or more prescription item from the medicine class over the previous 12 months broken by gaps of no more than one month. |
| Denominator | Number of patients prescribed one or more prescription item from the relevant medicine class in a rolling 2 month period. |
| Rationale /Comments | **This comparator is based on the recommendation of the Prescribed Medicines Review (PMR) with a few adjustments for consistency and practicality described here. It has not been developed by the Opioid prescribing Comparators working group.**  See the PMR report for rationale and comments and detailed evidence and analysis. i  For this comparator a 2 month rolling period has been used to calculate the denominator rather than the denominator specified in the PMR. This is to enable the comparator to be calculated for the latest month in line with other comparators in the dashboard rather than an extra month lag.  The 2 month rolling period was selected to provide some degree of smoothing to the denominator, and so that any patients counted in the numerator will be counted in the denominator. However, it should be noted that this specification may result in a more volatile comparator than the PMR comparator and may be more susceptible to variations from month to month – for example due to differences in the number of calendar days or dispensing days. |

## MS01: Patients receiving oral or transdermal opioids for more than three consecutive months

|  |  |
| --- | --- |
| Title | Patients receiving oral or transdermal opioids for more than three consecutive months |
| Description | Number of patients currently prescribed an oral or transdermal opioid for more than 3 months and therefore potentially at increased risk of admission to hospital for respiratory depression, overdose (accidental) or confusion.  See appendix 1 section 6 for the definitions oral or transdermal opioids included in this comparator. |
| Numerator | Number of patients by age group and gender prescribed one or more prescription item from the oral or transdermal opioid class for four consecutive months up to the reporting month.  **Oral or transdermal opioids**   |  |  |  | | --- | --- | --- | | Medicine group | BNF description | BNF Paragraph code | | Oral medicines containing 15mg or more of codeine or 10mg or more of dihydrocodeine | Non-opioid analgesics an compound analgesic preparations – sub-set. | 040701 | | Oral or transdermal opiods | Opioid Analgesics. sub-set where pharmaceutical route is oral or transdermal | 040702 | |
| Denominator | Total number of patients (list size) |
| Rationale /Comments | **This comparator was originally developed for the Medication Safety Dashboard and was referred to as PAIN03. It was originally developed in consultation with the Department of Health & Social Care Short Life Working Group and it has not been developed by the Opioid prescribing Comparators working group.**  An oral or transdermal opioid prescribed for more than 3 months may increase the risk of respiratory depression, overdose (accidental) or confusion.  The chronic use of opioids is defined as use for three months or longer and is associated with an increased risk of adverse events in various studies. For example, the Cochrane review ―Adverse events associated with medium- and long-term use of opioids for chronic non-cancer pain” identified that the incidence of all adverse events with chronic opioid use in trials was 78%, with an event rate of 7.5% for serious adverse events.  Opioids are an effective source of pain relief in many clinical situations, but their chronic use poses risks to patients which can outweigh the pain-relieving benefits.  The Opioids Aware resource is a key resource supporting this indicator. It is endorsed by the Faculty of Pain Medicine, Royal College of Anaesthetists and Public Health England. The resource advises review of patients on long term opioids to evaluate the ongoing risks and benefits.   * Opioids are prescribed long term for pain caused by a variety of conditions. * Adverse events associated with long term opioid use can be managed by the addition of sideeffect preventing medicines and by ensuring that patients are reviewed routinely. * 22% of patients experience adverse effects which outweigh the benefit from opioids beyond 6 months of treatment. * Patients taking opioids for longer than 3 months should be identified and reviewed to determine if the opioid is still necessary, and if so, they should have their supportive therapies optimised to reduce the number of associated side effects.   The indicator assumes that opioids prescribed in three consecutive months are for regular use although some patients may take these on an ―as required‖ basis.  **References**  1. SIGN <http://www.sign.ac.uk/sign-136-management-of-chronic-pain.html>  2. Els C, Jackson TD, Kunyk D, Lappi VG, Sonnenberg B, Hagtvedt R, Sharma S, Kolahdooz F, Straube S. Adverse events associated with medium- and long-term use of opioids for chronic non-cancer pain: an overview of Cochrane Reviews. <http://cochranelibrarywiley.com/doi/10.1002/14651858.CD012509.pub2/full>  3. Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain – American Pain Society (2009) <https://www.jpain.org/article/S1526-5900(08)00831-6/fulltext>  4. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016  5. Chronic pain: supporting safer prescribing of analgesics – British Medical Association <https://www.bma.org.uk/-/media/files/pdfs/collective%20voice/policy%20research/public%20and%20population%20health/analgesics-chronic-pain.pdf?la=en>  6. Public Health England. Opioids Aware: a resource for patients and healthcare professionals to support prescribing of opioid medicines for pain <https://www.rcoa.ac.uk/faculty-of-pain-medicine/opioids-aware>  7. European Pain Federation position paper on appropriate opioid use in chronic pain management <https://onlinelibrary.wiley.com/doi/full/10.1002/ejp.970>  8. Guidelines for pain management programmes in adults. British Pain Society <https://www.britishpainsociety.org/static/uploads/resources/files/pmp2013_main_FINAL_v6.pdf>  9. German Pain Society. Long-Term Opioid Use in Non-Cancer Pain <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4238316/pdf/Dtsch_Arztebl_Int-111-0732.pdf>  10. Defacto Long-term Opioid Therapy for Non-Cancer Pain <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3286630/> |

# Patient Identification Rates

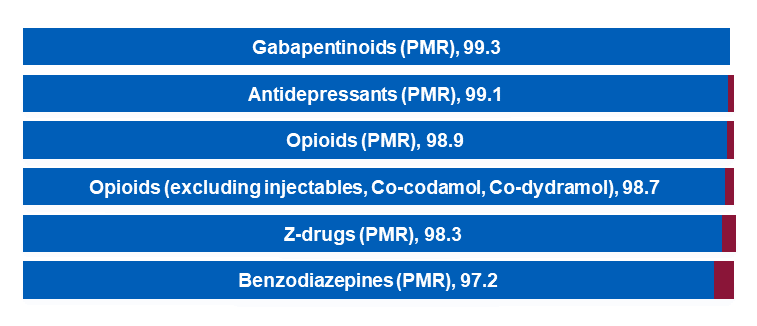
This section summarises data on the number of prescription items for which patients were not identified. This includes some analysis over time, by prescription type, form type and strength.

This is important to understand biases that may be present when analysing the comparators.

Since April 2017 the proportion of prescription items for these medicine classes with patients identified is high at around 99%. The proportion of items with identified patients was lowest for Benzodiazepines.

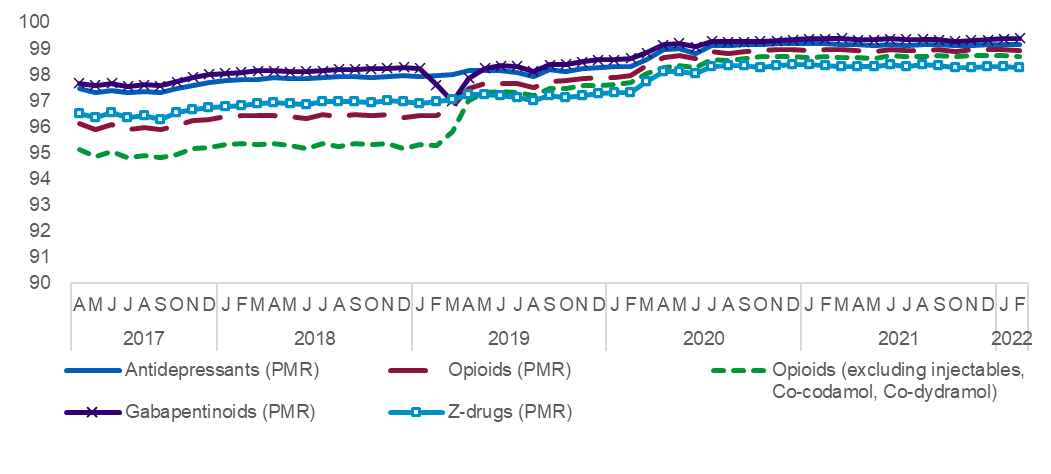
For EPS based comparators all patients are identified.

#### Figure 8.1: Proportion of prescribed items with identified patients from 12 months to February 2022, by PMR medicine class



The proportion of items with identified patients has generally increased over time largely reflecting the increased use of the Electronic Prescription Service (EPS) over time. This means that users should be careful interpreting long run trends relating to increases in the number of patients reported in the comparator. Long run trends that matching the general increase in the patient identification rate may be spurious.

#### Figure 8.2: Proportion of prescribed items with identified patients from April 2017 to February 2022, by PMR medicine class



The proportion of unidentified items in recent months correlates with the number of FP10SS forms versus other types. EPS is used for almost all FP10SS forms resulting in a higher proportion of identified items.

Benzodiazepines and Opiates have lower patient identification rates which is likely to reflect their use of other paper form types that are not submitted via EPS.

The proportion of items with identified patients is lower for FP10MDA and lower still for other types of prescription form.

Some controlled drugs are a little less likely to be linked to a patient than for other products included in these medicine classes, again this is likely to reflect – in part – the availability of the Electronic Prescription Service for some types of prescription or prescribing organisation.

#### Figure 8.3: Proportion of items with identified patients, 12 months to February 2022, for PMR medicine classes by Controlled Drug (CD) status

The chart below shows no strong bias across the opioids identified by strength in terms of OME. There is a lower proportion of opioid items for which a patient was identified for presentations that have not been assigned OME values.

#### Figure 8.4: Proportion of items with identified patients, 12 months to February 2022 for opioids by Oral Morphine equivalent strength

# Use of the Electronic Prescription Service for opiates

These comparators include an experimental indicator based on electronic prescribing system information as received by NHSBSA following claims from dispensers. These comparators provide more timely information about prescribing, but can provide an incomplete picture for patients with some paper prescribing.

This section describes the use of EPS for these medicines to establish the limitations of these comparators, and any potential biases that may be present.

EPS use for the opiates medicine class reached around 91% by February 2022, having increased gradually from around 87% in March 2020. Before that EPS rates were lower and increased sharply in response to the roll-out of the EPS system and the national lockdowns implemented following the outbreak of covid-19. Comparators based on EPS prescriptions are unlikely to provide meaningful comparisons over time, especially before the second quarter of 2020.

As a consequence EPS comparators may be considered to underestimate opioid patients or their items by around one in ten. Any analysis that relies on EPS data farther back in time, particularly before March 2020 will provide a less complete picture of prescribing.

#### Figure 9.1: Proportion of prescribed items submitted using the Electronic Prescription Service from April 2017 to February 2022, for opiates

Prescriptions using forms other than FP10SS forms are not submitted using the EPS system. For opiates overall this included about 0.7% of prescription items from January to July 2021 that mostly used FP10NC, FP10MDA, FP10D and FP10P forms. In terms of biases over products that may be excluded, there was slightly lower coverage of some higher strength opiates in particular for those with 600 to 720 mg Oral Morphine Equivalence.

#### Figure 9.2: Proportion of items submitted via the Electronic Prescription Service, 12 months to February 2022, for opioids by strength

# Appendix 1: Medicine group details

The comma separated values (csv) files include the lists of products by BNF code as of October 2022. Note the dashboard may include addition new pharmaceutical presentations when they meet the criteria for these groupings.

### Section 1: Antidepressants



### Section 2.1: Opioid Pain Medicines (PMR)



### Section 2.2 Opioid Pain Medicines (excluding injectables, Co-codamol, Co-dydramol)



### Section 2.3 Oral Morphine Equivalences



See appendix 2 for more detail on the sources used for the OME values.

### Section 2.4 Oral or Transdermal Opioids



### Section 3 Gabapentinoids



### Section 4 Benzodiazepines



### Section 5 Z-Drugs



# Appendix 2: Opioid pain medicines and Oral Morphine Equivalent Values

The following spreadsheet describes the methodology for the assignment of Oral Morphine Equivalence (OME) values to BNF presentations. These have been assigned to a set of BNF presentations with reference to the following sources, each BNF presentation is linked to a source “Reference code” corresponding to a source in the table below.

Many opiates included in the PMR medicine class do not have OME assigned, these are shown in the spreadsheet and in appendix 1\_2 where EQUIVALENCE\_VALUE is blank.  
  
Note since the original release the values used for hydromorphone presentations have been corrected.  
  
Note new presentations may not have OME values – these will be updated periodically when new OME values are agreed. Where a new presentation can be linked to a generic presentation for which an OME value is known then the generic value is used until or unless a specific different value is agreed.



|  |  |  |
| --- | --- | --- |
| **Reference Code** | **Reference Name** | **Reference Link** |
| BNF | British National Formulary | <https://www.bnf.org/products/bnf-online/> |
| CMS | Centres for Medicare & Medicaid Services | <https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/Opioid-Morphine-EQ-Conversion-Factors-March-2015.pdf> |
| GPN | GP Notebook | <https://www.gpnotebook.co.uk/> |
| MIMS | Monthly Index of Medical Specialities | <https://www.mims.co.uk/> |
| OA | Opioids Aware | <https://www.rcoa.ac.uk/faculty-of-pain-medicine/opioids-aware> |
| ABHB | Aneurin Bevan Health Board | <https://www.wales.nhs.uk/sites3/Documents/814/OpiateConversionDoses%5BFinal%5DNov2010.pdf> |
| PCF | Palliative Care Formulary |  |
| GE | Generic Equivalent | OME value based on generic equivalent BNF presentation |

# Appendix 3: Working groups

Please note that this working group developed the OP01-OP07 comparators.   
Other comparators have been included in the dashboard for ease of reference.  
PMR01-PMR02 comparators were based on work of the Prescribed Medicine Review[[5]](#footnote-5).  
The MS01 comparator was based on work for the NHSBSA Medication Safety Indicators dashboard.

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1. PHE (2019), *“Prescribed medicines review: report, Report of the review of the evidence for dependence on, and withdrawal from, prescribed medicines”* , <https://www.gov.uk/government/publications/prescribed-medicines-review-report> [↑](#footnote-ref-2)
2. Public Health England (2019) ‘Dependence and withdrawal associated with some prescribed medicines: An evidence review –technical annexe’, PMR, technical annexe, page 13 and Figure 1, https://app.box.com/s/2i61byjuz1bfxeik322iew2q3wpybck5/file/520664470668 [↑](#footnote-ref-3)
3. See the following document for more details, <https://www.nhsbsa.nhs.uk/sites/default/files/2018-02/180115%20Age%20Logic%20Summary%20Flow%20Chart%20-%20Revised%20Layout.pdf> [↑](#footnote-ref-4)
4. Association of public health Observatories (2010) , ‘Technical Briefing 3: Commonly used public health statistics and their confidence intervals’, <https://fingertips.phe.org.uk/documents/APHO%20Tech%20Briefing%203%20Common%20PH%20Stats%20and%20CIs.pdf> [↑](#endnote-ref-2)
5. PHE (2019), *“Prescribed medicines review: report, Report of the review of the evidence for dependence on, and withdrawal from, prescribed medicines”* , <https://www.gov.uk/government/publications/prescribed-medicines-review-report> [↑](#footnote-ref-5)