

Morphine Milligram Equivalent (MME) Online Calculator: Webinar

Friday, March 7th

12:00 pm – 1:00 pm EST

Meredith Adams, MD, MS; Kathy Sward, PhD

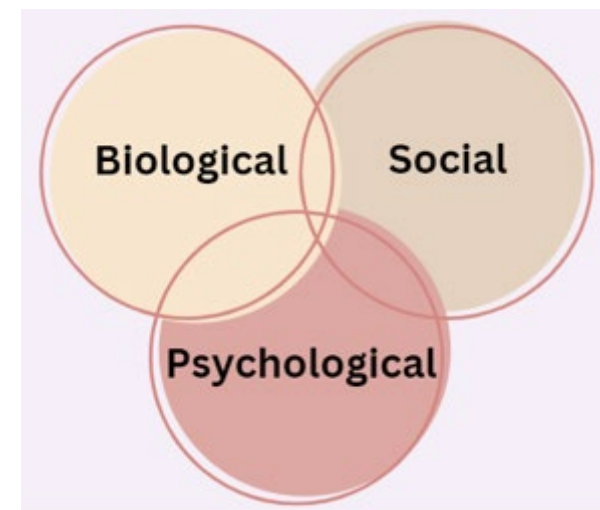
Giulia Bova, MA; Shelley Su, PhD; Carolyn Conlin, MS; Laura Wandner, PhD

Agenda

1. HEAL Common Data Elements (CDE) requirements (*3 minutes*)
2. The need for standardized MME data for HEAL (*3 minutes*)
3. HEAL CDE MME Requirements (*3 minutes*)
4. Demonstration of the online calculator (*30 minutes*)
5. Q&A (*15-20 minutes*)

HEAL Common Data Elements

- HEAL Common Data Elements (CDE) program requires HEAL-funded clinical pain studies to collect a common set of patient reported outcome screening tools spanning biopsychosocial domains
 - Pain research community gains access to comparable data across pain conditions, populations, and interventions
 - Compare results across trials and quantify impact of interventions



Pain Intensity	Pain Interference	Physical Functioning	Quality of Life	Sleep	Pain Catastrophizing	Depression	Anxiety	Global Satisfaction with treatment	Substance Use Screener	MME	Demographics
BPI Pain Severity <i>(Chronic pain)</i>	BPI Pain Interference <i>(Chronic Pain)</i>	PROMIS Physical Functioning Short Form 6B	WHOQOL-BREF (2 Qs)	PROMIS Sleep Disturbance 6A + Sleep Duration Question	PCS-6 or PCS-13	PHQ-2 or PHQ-8 or PHQ-9	GAD-2 or GAD-7	PGIC	TAPS1	Components of MME + total MME	Adult Demographics
PEG <i>(Acute Pain)</i>											



Morphine Milligram Equivalents (MME)

- Initially created to help clinicians determine opioid doses based on morphine using conversion factors
- Four definitions to calculate:
 - Total Day Supply
 - Therapy Days
 - Fixed Observation Windows
 - Maximum Daily Dose
- Calculation definitions serve different purposes
 - Estimate overdose potential
 - Address fluidity in opioid prescribing
- Calculation varies by approaches (i.e., clinical trial, PDMP, claims data)

Benefits of MME Standardization

- MME values can vary drastically across different calculation definitions.
 - Standardization provides a common ground.
- Opportunity to re-evaluate the utility of opioid therapeutics that have been excluded from prior MME calculators
- Enables health outcome comparisons across subjects within a trial and across HEAL studies
- Conversion factors can be adjusted in response to growing evidence and data

HEAL CDE MME Requirements

- Collect data on prescribed/dispensed opioid use for pain management in trials involving human subjects
 - Reported as MME/day
 - Data collection is for research purposes only
 - Collect at two separate timepoints
 - Recommendation: studies harmonize on time points and sampling frame (past week, past month, etc)
- Ways to collect data:
 - REDCap Data Dictionary available for HEAL PIs and/or case report form (CRF)
 - [New online MME calculator](#)

HEAL CDE MME Requirements: Caveats

- Tool is intended for **research purposes only**, not to inform clinical decision making
- Tool should **NOT** be used in evaluating opioid medications for the treatment of opioid use disorder.

Demonstration: MME Tool

Medication	CDC 2016 Conversion Ratio	CDC 2022 Conversion Ratio	NIH HEAL 2024 Conversion Ratio
Buprenorphine tablet/ film (mg) sublingual	30	—	30.8
Buprenorphine buccal film (mcg) buccal	0.03	—	0.039
Buprenorphine patch (mcg/hr) transdermal	12.6	—	2.2
Butorphanol (mg)	7	—	7
Codeine (mg)	0.15	0.15	0.15
Dihydrocodeine (mg)	0.25	—	0.25
Fentanyl buccal (mcg)	0.13	—	0.13
Fentanyl oral lozenge (mcg)	0.13	—	0.18
Fentanyl nasal (mcg)	0.16	—	0.16
Fentanyl patch (mcg/hr)	7.2	2.4	2.4
Hydrocodone (mg)	1	1	1
Hydrocodone LA (mg)	—	—	1
Hydromorphone (mg)	4	5	5
Hydromorphone (mg) LA	—	—	5
Levorphanol tartrate (mg)	11	—	11
Meperidine HCl (mg)	0.1	—	0.1
Methadone (mg)	Varies by dose (4 to 12)	4.7	4.7
Morphine (mg)	1	1	1
Morphine (mg) LA	—	—	1
Opium (mg)	1	—	1
Oxycodone (mg)	1.5	1.5	1.5
Oxycodone (mg) LA	—	—	1.5
Oxymorphone (mg)	3	3	3
Oxymorphone (mg) LA	—	—	3
Pentazocine (mg)	0.37	—	0.37
Tapentadol (mg)	0.4	0.4	0.3
Tapentadol (mg) LA	—	—	0.3
Tramadol (mg)	0.1	0.2	0.2
Tramadol (mg) LA	—	—	0.2

Summary of Conversion Factors

Literature to support contents

Where to find the MME/REDCap File
Information

REDCap Tool Demonstration

Website Demonstration



Standardizing research methods for opioid dose comparison: the NIH HEAL morphine milligram equivalent calculator

Meredith C. B. Adams^{a,*}, Katherine A. Sward^{b,c}, Matthew L. Perkins^d, Robert W. Hurley^a

Abstract

We developed the National Institutes of Health helping to end addiction long-term initiative morphine milligram equivalent (MME) calculator to standardize MME calculations across pain research studies, addressing a critical barrier to effective research synthesis and meta-analysis. The tool provides evidence-based mapping factors for 29 opioids through a research electronic data capture-based calculator and companion Web site (research-mme.wakehealth.edu). Development involved systematic evidence evaluation of literature from 1949 to March 2024, following PRISMA guidelines. From an initial screening of over 170,050 articles, we identified 24 studies providing evidence for conversion factors. The calculator incorporates 4 standardized time-window calculation methods aligned with current research approaches and includes traditional full agonists, partial agonists, and mixed-mechanism agents. Using modified GRADE methodology, we evaluated evidence quality for each conversion factor, documenting levels from high-quality randomized controlled trials to pharmacokinetic extrapolation. Our tool replicates most existing Centers for Disease Control and Prevention (CDC) conversion factors while expanding coverage to 7 additional opioids and 6 formulations not included in the 2022 CDC conversion table. The calculator features options to analyze results with or without buprenorphine, accommodating its emerging role in pain research. This standardized framework enables researchers to map opioid doses using consistent, evidence-based ratios and harmonize data collection across research networks. While the tool represents a significant advance in standardizing MME calculations for research, limitations in the underlying evidence base highlight the need for continued validation through clinical research.

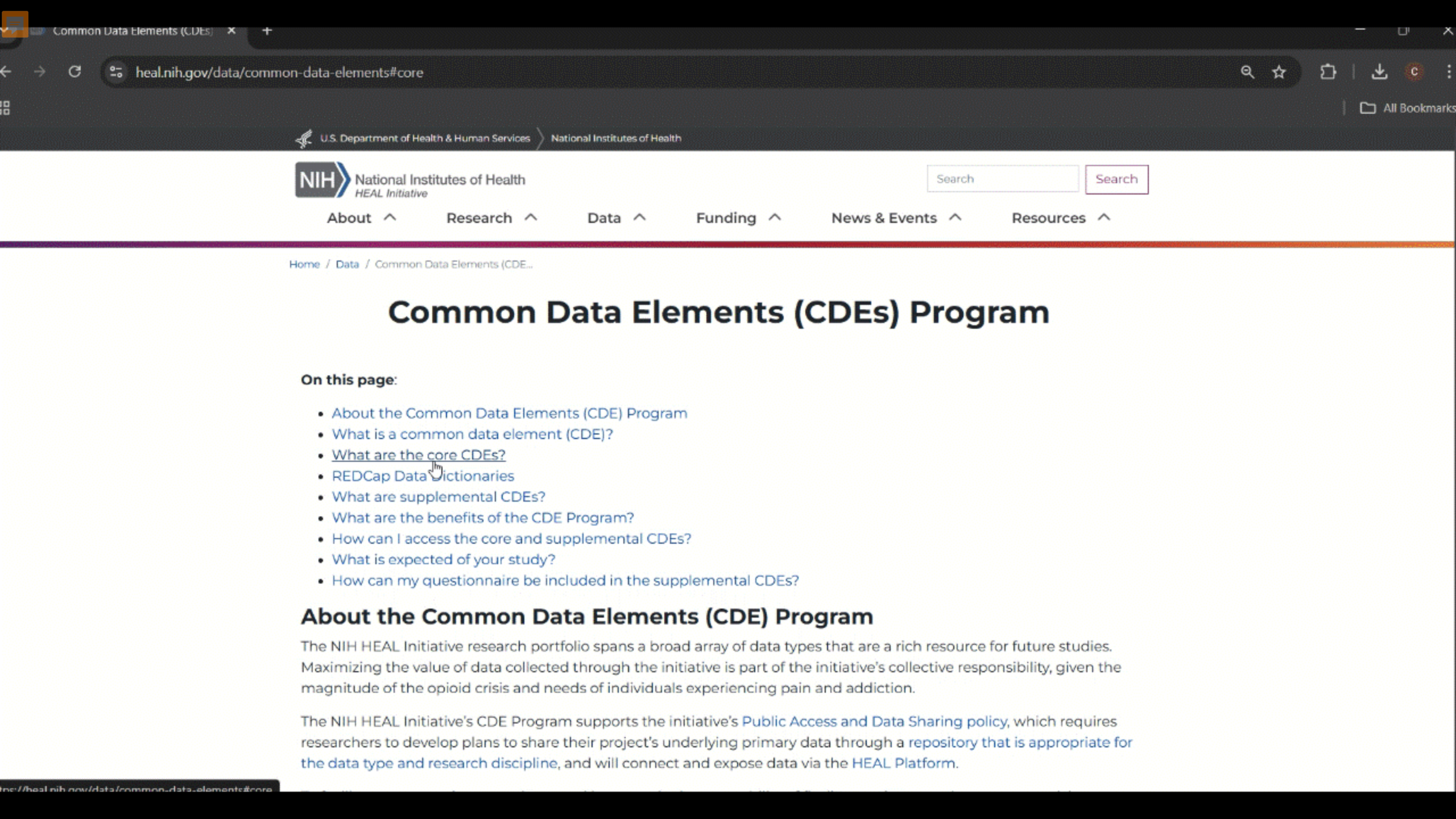
Keywords: Opioid analgesia, FAIR (findable, accessible, interoperable, reusable), Morphine milligram equivalents (MMEs), Data calculator tool, NIH HEAL, Data harmonization

1. Introduction

Standardizing pain research data collection and analysis methodologies remains a critical challenge in the field of pain science.

Pain research faces a fundamental methodological challenge: the lack of standardization in quantifying opioid doses across studies. While MMEs serve as a common metric for comparing

Where to find the MME CRF and REDCap Files



Common Data Elements (CDEs) Program

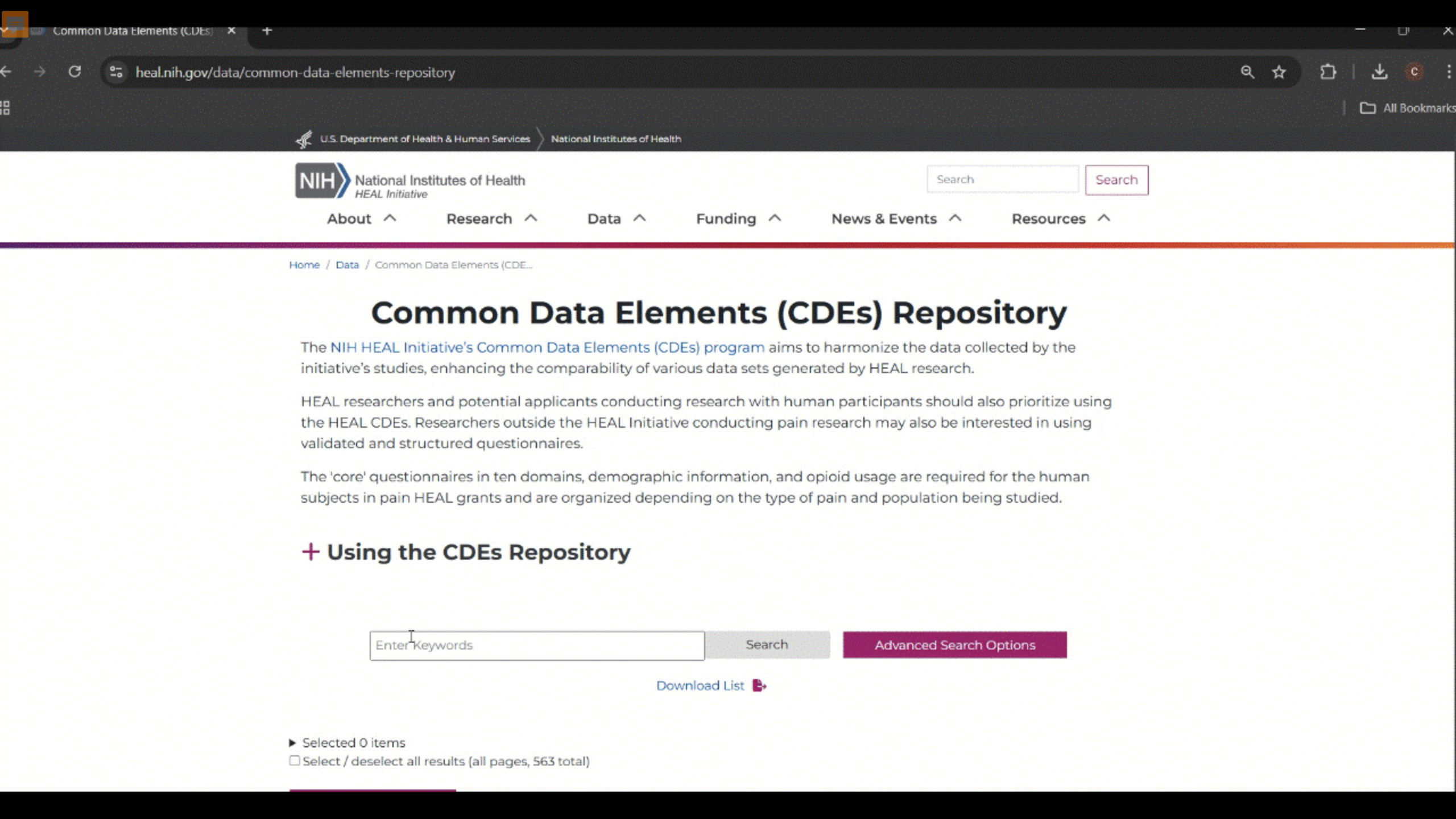
On this page:

- [About the Common Data Elements \(CDE\) Program](#)
- [What is a common data element \(CDE\)?](#)
- [What are the core CDEs?](#)
- [REDCap Data Dictionaries](#)
- [What are supplemental CDEs?](#)
- [What are the benefits of the CDE Program?](#)
- [How can I access the core and supplemental CDEs?](#)
- [What is expected of your study?](#)
- [How can my questionnaire be included in the supplemental CDEs?](#)

About the Common Data Elements (CDE) Program

The NIH HEAL Initiative research portfolio spans a broad array of data types that are a rich resource for future studies. Maximizing the value of data collected through the initiative is part of the initiative's collective responsibility, given the magnitude of the opioid crisis and needs of individuals experiencing pain and addiction.

The NIH HEAL Initiative's CDE Program supports the initiative's [Public Access and Data Sharing](#) policy, which requires researchers to develop plans to share their project's underlying primary data through a repository that is appropriate for the data type and research discipline, and will connect and expose data via the [HEAL Platform](#).



Common Data Elements (CDEs) Repository

The NIH HEAL Initiative's [Common Data Elements \(CDEs\) program](#) aims to harmonize the data collected by the initiative's studies, enhancing the comparability of various data sets generated by HEAL research.

HEAL researchers and potential applicants conducting research with human participants should also prioritize using the HEAL CDEs. Researchers outside the HEAL Initiative conducting pain research may also be interested in using validated and structured questionnaires.

The 'core' questionnaires in ten domains, demographic information, and opioid usage are required for the human subjects in pain HEAL grants and are organized depending on the type of pain and population being studied.

+ Using the CDEs Repository

Search

[Advanced Search Options](#)[Download List](#)

▶ Selected 0 items

☐ Select / deselect all results (all pages, 563 total)

The 'core' questionnaires in ten domains, demographic information, and opioid usage are required for the human subjects in pain HEAL grants and are organized depending on the type of pain and population being studied.

[Download List](#)  [Save this Search](#) 

Select All	Description	File Name	File Language	Core or Supplemental	Research Topic
☐	The Opioid MME is the amount of	File	English	All Core	Opioids

The MME REDCap Survey

NIH HEAL Morphine Milligram Equivalents (MME)



Additional Information about MME/Day Definitions

24h MME for Drug X: Morphine millequivalent calculation for Drug X for a single day, calculated as (dose) * (number of doses per day) * (conversion factor)

MME for Drug X: Morphine millequivalent calculation for Drug X for the whole prescription, calculated as (dose) * (number of doses per day) * (conversion factor) * (prescription duration in days)

Total MME: The MME for each medication, summed across all prescriptions. Automatically calculated. This is the numerator for MME/Day definitions 1, 2, and 3.

MME/Day: An aggregate measure, calculating the total MME divided by a specified time window (a number of days). The MME/Day definitions specify the number of days.

Time Windows

Total Days Supply: The sum of the entered prescription duration (days) for each medication (Med 1 duration + med 2 duration...). Automatically calculated. This is the denominator for MME/Day definition 1.

On-therapy Days: The sum of prescription duration (days) for each medication, but with each calendar day counted only ONCE. If there is only one prescription, or if there is no calendar overlap (no days on which more than one prescription is active), this will be the same as the total days supply. If there are overlapping prescriptions, this is the number of unique calendar days. This is the denominator for MME/Day definition 2.

Fixed Observation Window: A study-defined window of time. Typical choices are 7 day, 14 day, 30 day, 90 day. This is the denominator for MME/Day definition 3.

One day: Typically, the day with highest opioid exposure is entered, and the sum of 24 hour MME across the drugs that apply to this day is calculated. Highest MME in one day is definition 4.

MME/Day Definitions

MME/Day Definition 1. Total Days Supply. Total MME / Total Days Supply time window (sum of entered prescription durations).

- Note that the same calendar day may contribute multiple times, if overlapping prescriptions.
- Reason to select this definition: The least complicated calculation; appears best suited when immediate-release opioids are prescribed for short discrete times.
- Identified challenge with this definition: It consistently underestimated MME per day when overlapping prescriptions were present or when immediate-release and extended release opioids were prescribed concurrently.

NIH HEAL Morphine Milligram Equivalents (MME)

AAA



[View survey instructions](#)

Background: The NIH HEAL CDE program requires clinical pain studies to collect data on prescribed/dispensed opioid use for pain management in trials involving human subjects. Prescribed/dispensed opioid use will be reported as daily morphine milligram equivalents (MMEs), which is a metric to estimate analgesic profile and/or overdose potential of the prescribed opioid medications. **Daily MMEs should NOT be used in evaluating opioid medications for the treatment of opioid use disorder.**

There are four definitions to calculate daily MMEs: (1) Total Day Supply (nonoverlapping prescription days); (2) Therapy Days (overlapping prescription days); (3) Fixed Observation Window; (4) Maximum Daily Dose (Dasgupta et al., 2021). The standardization of calculating daily MMEs is not established in clinical or research settings, and each definition has utility based on the primary research goal. Hence, data collection on these four definitions within HEAL-funded studies presents a unique opportunity to build an evidence base on best practices in calculating daily MMEs and work towards standardizing daily MME reporting.

The collection of MME data is intended for **research purposes** only. These data will not be shared with prescription drug monitoring programs (PDMPs) or health care professionals overseeing opioid use for pain management for participants enrolled in the study. The data collection effort is NOT intended for any clinical decision-making by clinicians while prescribing opioids. The MME conversion factors in this tool DO NOT constitute any clinical guidance for prescribing or recommendations for converting patients from one form of opioid analgesic to another. These calculations are for the conversion of opioid medication TO morphine equivalents, and are not intended to be used in the reverse direction

Instructions: Daily MMEs will be collected at two separate time points per participant. It is recommended that individual studies within a HEAL-funded program harmonize on these data collection time points, and harmonize on the sampling frame (e.g., past week, past month, etc). Please enter the information requested in the following form about the most recent opioids prescribed to study participants. The MME tool will automatically calculate the MME for each opioid medication, and then calculate the total and daily MME across all the opioid medications based on four definitions. Opioid medication, dose, prescription duration, and the four daily MME definition values must be included as part of your submission to the HEAL Data Ecosystem. This intensive data collection effort will create a valuable data resource to enable comparisons across opioid analgesic medications (and different routes of administration), between time points, and across HEAL funded studies.

This tool should be completed by research staff, and not by participants.

Is the participant taking an opioid medication for pain management?

☒ Yes ☐ No

[reset](#)

* must provide value

Select all opioid medication(s) that apply

- ☐ Buprenorphine (e.g., Suboxone, Butrans, Bunavail)
- ☐ Butorphanol (e.g., Stadol, Dolorex)
- ☐ Codeine
- ☐ Dihydrocodeine (e.g., Panlor-DC, Trezix)

NIH HEAL Morphine Milligram Equivalents (MME)

AAA



Next, enter information about the opioid medications.

Oxycodone

Which formulation(s) of oxycodone is being taken?

- ☒ Short acting or unspecified
- ☒ Long acting/extended release

Oxycodone short acting dose (mg)?

5

Number of oxycodone short acting doses per day?

2

Duration of oxycodone short acting prescription (in days)?

7

Oxycodone long acting dose (mg)?

30

Number of oxycodone long acting doses per day?

2

Duration of oxycodone long acting prescription (in days)?

30

Oxycodone calculated MME

2805

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Save & Return Later

Therapy Days and Observation Windows EXCLUDING Buprenorphine**Total MME across prescriptions**

(calculated automatically, excludes buprenorphine)

2805

Total opioid exposure (numerator for MME/Day calculations)

Total Days Supply

(calculated automatically, excludes buprenorphine)

37

Denominator for Definition 1

*Sum of prescription duration days***On-therapy Days**

Please ENTER the sum of prescription duration days, excluding buprenorphine days, with each calendar day counted only ONCE.

30

Denominator for Definition 2

If only one prescription or no overlapping days this will be same as the total days supply: **37**

* must provide value

Fixed Observation Window.

ENTER the number of days. This is a study-defined interval.

90

Denominator for Definition 3

Examples: 7 days, 30 days, 60 days, 90 days.

* must provide value

Opioid MME/Day Calculations EXCLUDING Buprenorphine**MME/Day Definition 1. Total Days Supply**

(excluding buprenorphine)

Total MME across prescriptions/Total Days Supply

75.81

MME/Day Definition 2. On-therapy Days

Research MME Calculator Website/ORCID login

Website access: Research-MME.wakehealth.edu

Morphine Milligram Equivalent Calculator



Sign in

ORCID LOGIN WITH ORCID

SIGN UP FOR ORCID



The NIH HEAL Initiative requires that clinical pain studies monitor use of opioids prescribed for pain management, reported in morphine milligram equivalents (MME). Please enter the information requested in the following form about the prescription opioids used by study participants, and it will calculate the MME based on several standardized definitions. The information in this form must be included as part of your submission to the HEAL Data Ecosystem. This MME data collection tool is intended as a data resource for: research, analytical purposes using claims or dispensing data, and surveillance of population-level medication utilization.



Info

The data collection tool is **NOT** intended for any clinical decision-making by clinicians while prescribing opioids. The MME conversion factors in this survey **DO NOT** constitute any clinical guidance for prescribing or recommendations for converting patients from one form of opioid analgesic to another.



Morphine Milligram Equivalent Calculator



Sign in

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Create your ORCID iD

Step 1 of 5 - Names and emails

Per ORCID's [terms of use](#) you may only register for an ORCID iD for yourself. Already have an ORCID iD? [Sign In](#)

Your names

Given names

The names you most commonly go by

Family names (Optional)

Your family name or surname

Website Functionality Overview

Morphine Milligram Equivalent Calculator

- ☐ Codeine (mg)
- ☐ Dihydrocodeine (mg)
- ☐ Fentanyl
- ☐ Hydrocodone
- ☐ Hydromorphone
- ☐ Levorphanol tartrate (mg)
- ☐ Meperidine HCL (mg)
- ☐ Methadone
- ☐ Morphine
- ☐ Opium
- ☐ Oxycodone

No data to calculate. Please add Medication Amounts.

Select a checkbox and enter medication amounts here

Skip

Next (1/11)

00000 mg

With Buprenorphine	Total MME With Buprenorphine:	0.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1)		N/A
On-therapy Days MME (Definition 2)		N/A
Fixed Observation Window MME (Definition 3)		N/A
Maximal Daily Dose MME (Definition 4)		N/A

Morphine Milligram Equivalent Calculator

- ☐ Butorphanol (mg)
- ☐ Codeine (mg)
- ☐ Dihydrocodeine (mg)
- ☐ Fentanyl
- ☐ Hydrocodone
- ☐ Hydromorphone
- ☐ Levorphanol tartrate (mg)
- ☐ Meperidine HCL (mg)
- ☐ Methadone (mg)
- ☐ Morphine
- ☐ Opium (mg)
- ☐ Oxycodone

No data to calculate. Please add Medication Amounts.

Configure your medications and dosages here. Select the checkboxes for each medication you want to add to the MME calculations

Skip

Next (1/11)

00000
mg

With Buprenorphine	Total MME With Buprenorphine:	0.000000 mg
--------------------	-------------------------------	-------------

On-Therapy Days

Observation Window

Total Days' Supply MME (Definition 1)	(i)	N/A
---------------------------------------	-----	-----

On-therapy Days MME (Definition 2)	(i)	N/A
------------------------------------	-----	-----

Fixed Observation Window MME (Definition 3)		N/A
---	---	-----

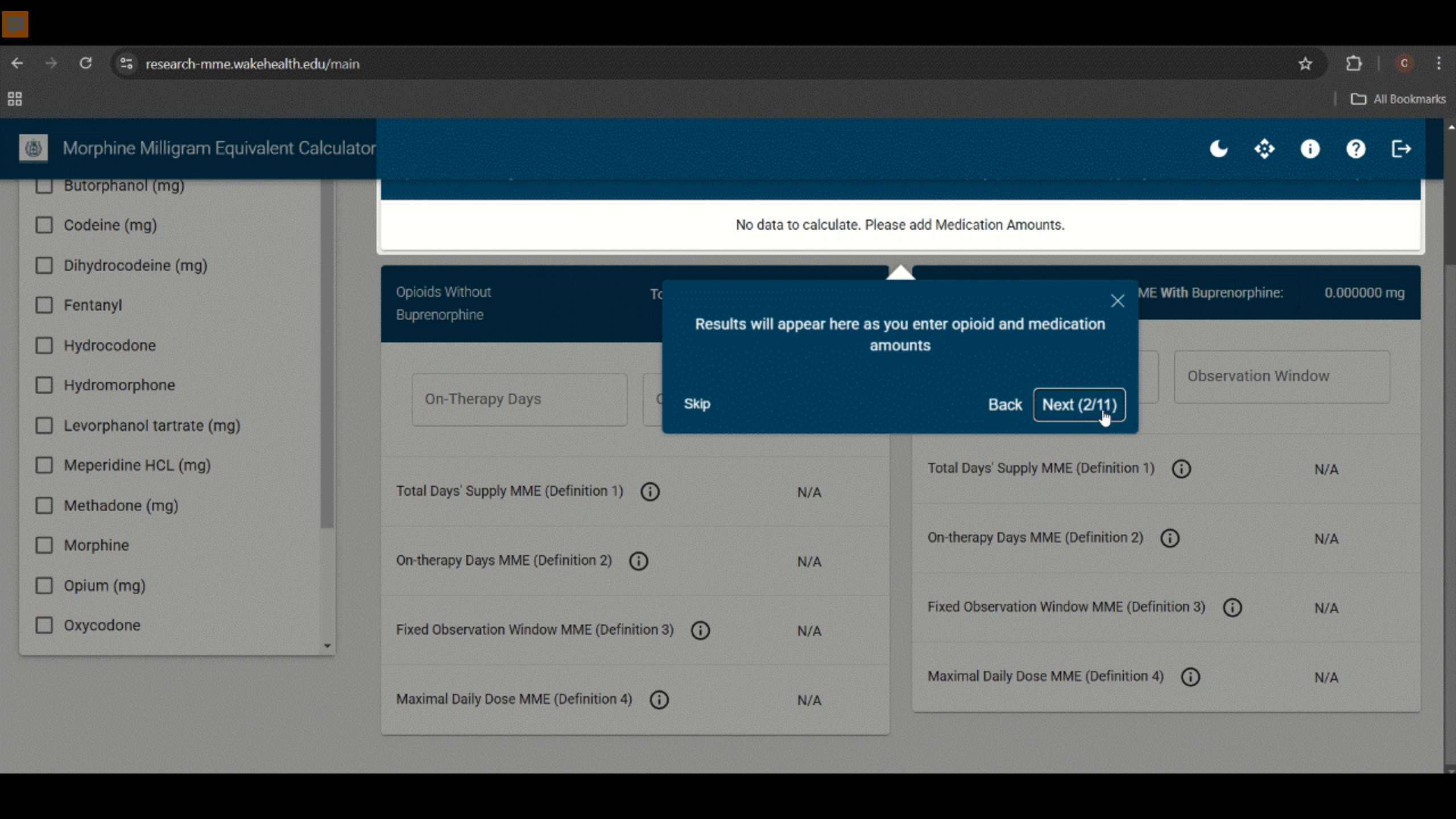
Maximal Daily Dose MME (Definition 4)	(i)	N/A
---------------------------------------	-----	-----

Total Days' Supply MME (Definition 1)	(i)	N/A
---------------------------------------	-----	-----

On-therapy Days MME (Definition 2)	(i)	N/A
------------------------------------	-----	-----

Fixed Observation Window MME (Definition 3)	(i)	N/A
---	-----	-----

Maximal Daily Dose MME (Definition 4)	(i)	N/A
---------------------------------------	-----	-----



Morphine Milligram Equivalent Calculator

- ☐ Butorphanol (mg)
- ☐ Codeine (mg)
- ☐ Dihydrocodeine (mg)
- ☐ Fentanyl
- ☐ Hydrocodone
- ☐ Hydromorphone
- ☐ Levorphanol tartrate (mg)
- ☐ Meperidine HCL (mg)
- ☐ Methadone (mg)
- ☐ Morphine
- ☐ Opium (mg)
- ☐ Oxycodone

No data to calculate. Please add Medication Amounts.

Opioids Without Buprenorphine ME With Buprenorphine: 0.000000 mg

Results will appear here as you enter opioid and medication amounts

Skip Back **Next (2/11)**

On-Therapy Days		Observation Window
Total Days' Supply MME (Definition 1) ⓘ	N/A	Total Days' Supply MME (Definition 1) ⓘ N/A
On-therapy Days MME (Definition 2) ⓘ	N/A	On-therapy Days MME (Definition 2) ⓘ N/A
Fixed Observation Window MME (Definition 3) ⓘ	N/A	Fixed Observation Window MME (Definition 3) ⓘ N/A
Maximal Daily Dose MME (Definition 4) ⓘ	N/A	Maximal Daily Dose MME (Definition 4) ⓘ N/A

- ☐ Buprenorphine
- ☐ Butorphanol (mg)
- ☐ Codeine (mg)
- ☐ Dihydrocodeine (mg)
- ☐ Fentanyl
- ☐ Hydrocodone
- ☐ Hydromorphone
- ☐ Levorphanol tartrate (mg)
- ☐ Meperidine HCL (mg)
- ☐ Methadone (mg)
- ☐ Morphine
- ☐ Opium (mg)
- ☐ Oxycodone

[Back](#) [Next \(3/11\)](#)

Observation Windows (Days)

Please add Medication Amounts.

0.00000
mg

Observation Window

N/A



N/A



N/A

0.000000 mg

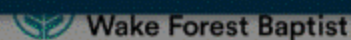
Observation Window



N/A

NDA



Morphine Milligram Equivalent Calculator Configure Medication Dosage and Amounts

- ☐ Buprenorphine
- ☐ Butorphanol (mg)
- ☐ Codeine (mg)
- ☐ Dihydrocodeine (mg)
- ☐ Fentanyl
- ☐ Hydrocodone
- ☐ Hydromorphone
- ☐ Levorphanol tartrate (mg)
- ☐ Meperidine HCL (mg)
- ☐ Methadone (mg)
- ☐ Morphine
- ☐ Opium (mg)
- ☐ Oxycodone

Results

Enter therapy days and observation days WITHOUT buprenorphine

Skip

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On-Therapy Days

Observation Window

Total Days' Supply MME (Definition 1)	(i)	N/A
---------------------------------------	-----	-----

On-therapy Days MME (Definition 2)	(i)	N/A
------------------------------------	-----	-----

Fixed Observation Window MME (Definition 2) N/A

Please add Medication Amounts.

With Buprenorphine	Total MME With Buprenorphine:	0.000000 mg
--------------------	-------------------------------	-------------

On-Therapy Days

Observation Window

Total Days' Supply MME (Definition 1)	(i)	N/A
---------------------------------------	-----	-----

On-therapy Days MME (Definition 2)	(i)	N/A
------------------------------------	-----	-----

Fixed Observation Window MME (Definition 3)	(i)	N/A
---	-----	-----

research-mme.wakehealth.edu/main

Morphine Milligram Equivalent Calculator

☐ Butorphanol (mg)

☐ Codeine (mg)

☐ Dihydrocodeine (mg)

☐ Fentanyl

☐ Hydrocodone

☐ Hydromorphone

☐ Levorphanol tartrate (mg)

☐ Meperidine HCL (mg)

☐ Methadone (mg)

☐ Morphine

☐ Opium (mg)

☐ Oxycodone

No data to calculate. Please add data.

Opioids Without Buprenorphine	Total MME Without Buprenorphine:	0.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1) ⓘ		N/A
On-therapy Days MME (Definition 2) ⓘ		N/A
Fixed Observation Window MME (Definition 3) ⓘ		N/A
Maximal Daily Dose MME (Definition 4) ⓘ		N/A

MME definitions and calculations WITH buprenorphine

Skip

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Next (5/11)

With Buprenorphine	Total MME With Buprenorphine:	0.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1) ⓘ		N/A
On-therapy Days MME (Definition 2) ⓘ		N/A
Fixed Observation Window MME (Definition 3) ⓘ		N/A
Maximal Daily Dose MME (Definition 4) ⓘ		N/A

research-mme.wakehealth.edu/main

Morphine Milligram Equivalent Calculator

☐ Butorphanol (mg)

☐ Codeine (mg)

☐ Dihydrocodeine (mg)

☐ Fentanyl

☐ Hydrocodone

☐ Hydromorphone

☐ Levorphanol tartrate (mg)

☐ Meperidine HCL (mg)

☐ Methadone (mg)

☐ Morphine

☐ Opium (mg)

☐ Oxycodone

No data to calculate. Please add Medication Amounts.

Opioids Without Buprenorphine

Total MME Without Buprenorphine:

0.000000 mg

On-Therapy Days

Observation Window

Total Days' Supply MME (Definition 1)

N/A

On-therapy Days MME (Definition 2)

N/A

Fixed Observation Window MME (Definition 3)

N/A

Maximal Daily Dose MME (Definition 4)

N/A

With Buprenorphine

Total MME With Buprenorphine:

0.000000 mg

On-Therapy Days

Observation Window

Enter therapy days and observation days WITH buprenorphine

Skip

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Next (6/10)

Fixed Observation Window MME (Definition 3)

N/A

Maximal Daily Dose MME (Definition 4)

N/A

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☆ | 📁 All Bookmarks

Morphine Milligram Equivalent Calculator

⊕

Configure Medication Dosage and Amounts

☐ Buprenorphine

☐ Butorphanol (mg)

☐ Codeine (mg)

☐ Dihydrocodeine (mg)

☐ Fentanyl

☐ Hydrocodone

☐ Hydromorphone

☐ Levorphanol tartrate (mg)

☐ Meperidine HCL (mg)

☐ Methadone (mg)

☐ Morphine

☐ Opium (mg)

Atrium Health

Wake Forest Baptist

Results

Opioid

Dosage

Doses in 24 Hours

Conversion Factor

Rx Duration (Days)

On Therapy Days

Observation Window (Days)

No data to calculate. Please add Medication Amounts.

Opioids Without Buprenorphine

Total MME Without Buprenorphine:

0.000000 mg

On-Therapy Days

Observation Window

Total Days' Supply MME (Definition 1) ⓘ

N/A

On-therapy Days MME (Definition 2) ⓘ

N/A

With Buprenorphine

Total MME With Buprenorphine:

0.000000 mg

On-Therapy Days

Observation Window

Total Days' Supply MME (Definition 1) ⓘ

N/A

On-therapy Days MME (Definition 2) ⓘ

N/A

View API Docs

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API Docs



- ⚙️ Configure Medication Dosage and Amounts
- ☐ Buprenorphine
- ☐ Butorphanol (mg)
- ☐ Codeine (mg)
- ☐ Dihydrocodeine (mg)
- ☐ Fentanyl
- ☐ Hydrocodone
- ☐ Hydromorphone
- ☐ Levorphanol tartrate (mg)
- ☐ Meperidine HCL (mg)
- ☐ Methadone (mg)
- ☐ Morphine
- ☐ Opium (mg)

Results

Opioid	Dosage	Doses in 24 Hours	Conversion Factor	Rx Duration (Days)	On Therapy Days	Observation Window (Days)
No data to calculate. Please add Medication Amounts.						

Opioids Without Buprenorphine

Total MME Without Buprenorphine:

0.000000 mg

On-Therapy Days

Observation Window

Total Days' Supply MME (Definition 1) ⓘ

N/A

On-therapy Days MME (Definition 2) ⓘ

N/A

With Buprenorphine

Total MME With Buprenorphine:

0.000000 mg

On-Therapy Days

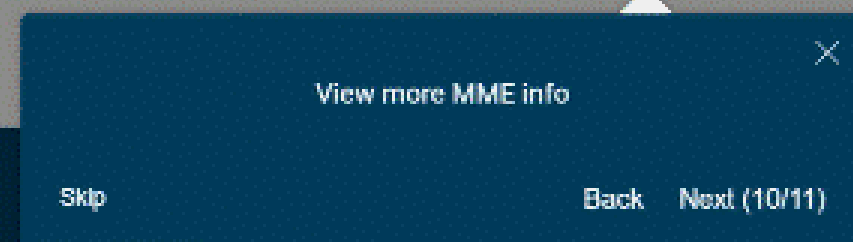
Observation Window

Total Days' Supply MME (Definition 1) ⓘ

N/A

On-therapy Days MME (Definition 2) ⓘ

N/A

Fixed Observation Method (MIF) Definition 1) 11/1

On-therapy Days MME (Definition 2)	①	N/A
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Entering MME information

Morphine Milligram Equivalent Calculator

- ☐ Hydromorphone
- ☐ Levorphanol tartrate (mg)
- ☐ Meperidine HCL (mg)
- ☐ Methadone (mg)
- ☐ Morphine
- ☐ Opium (mg)
- ☒ Oxycodone

☐ Oxycodone (mg)

☐ Oxycodone (mg) LA

☐ Oxymorphone☐ Pentazocine (mg)☐ Tapentadol☐ Tramadol

Results

Opioid	Dosage	Doses in 24 Hours	Conversion Factor	Rx Duration (Days)	On Therapy Days	Observation Window (Days)
No data to calculate. Please add Medication Amounts.						

Opioids Without Buprenorphine	Total MME Without Buprenorphine:	0.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1) ⓘ		N/A
On-therapy Days MME (Definition 2) ⓘ		N/A
Fixed Observation Window MME (Definition 3) ⓘ		N/A
Maximal Daily Dose MME (Definition 4) ⓘ		N/A

With Buprenorphine	Total MME With Buprenorphine:	0.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1) ⓘ		N/A
On-therapy Days MME (Definition 2) ⓘ		N/A
Fixed Observation Window MME (Definition 3) ⓘ		N/A
Maximal Daily Dose MME (Definition 4) ⓘ		N/A

Morphine Milligram Equivalent Calculator

☐ Methadone (mg)

☐ Morphine

☐ Opium (mg)

☒ Oxycodone

☒ Oxycodone (mg)

Dose

5

Number of doses in 24 hours

2

Prescription duration (days)

7

 Oxycodone (mg) LA

☐ Oxymorphone

☐ Pentazocine (mg)

☐ Tapentadol

Results						
Opioid	Dosage	Doses in 24 Hours	Conversion Factor	Rx Duration (Days)	On Therapy Days	Observation Window (Days)
 Oxycodone - Oxycodone (mg)	5	2	1.5	7	N/A	N/A

Opioids Without Buprenorphine	Total MME Without Buprenorphine:	105.000000 mg
On-Therapy Days		Observation Window
Total Days' Supply MME (Definition 1) 	15.000000	
On-therapy Days MME (Definition 2) 	N/A	
Fixed Observation Window MME (Definition 3) 	N/A	

With Buprenorphine	Total MME With Buprenorphine:	105.000000 mg
On-Therapy Days		Observation Window
Total Days' Supply MME (Definition 1) 	15.000000	
On-therapy Days MME (Definition 2) 	N/A	
Fixed Observation Window MME (Definition 3) 	N/A	

Morphine Milligram Equivalent Calculator

☒ Oxycodone

☒ Oxycodone (mg)

Dose

5

Number of doses in 24 hours

2

Prescription duration (days)

7

☒ Oxycodone (mg) LA

Dose

30

Number of doses in 24 hours

2

Prescription duration (days)

30

☐ Oxymorphone

☐ Pentazocine (mg)

☐ Tapentadol

Results						
Opioid	Dosage	Doses in 24 Hours	Conversion Factor	Rx Duration (Days)	On Therapy Days	Observation Window (Days)
 Oxycodone - Oxycodone (mg)	5	2	1.5	7	N/A	N/A
 Oxycodone - Oxycodone (mg) LA	30	2	1.5	30	N/A	N/A

Opioids Without Buprenorphine	Total MME Without Buprenorphine:	2805.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1) 		75.810811
Total MME / Sum of days of medication supplied		
On-therapy Days MME (Definition 2) 		N/A

With Buprenorphine	Total MME With Buprenorphine:	2805.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1) 		75.810811
On-therapy Days MME (Definition 2) 		N/A

Morphine Milligram Equivalent Calculator

☒ Oxycodone

☒ Oxycodone (mg)

Dose5Number of doses in 24 hours2Prescription duration (days)7

☒ Oxycodone (mg) LA

Dose30Number of doses in 24 hours2Prescription duration (days)30

☐ Oxymorphone☐ Pentazocine (mg)☐ Tanentadol

Opioid	Dosage	Doses in 24 Hours	Conversion Factor	Rx Duration (Days)	On Therapy Days	Observation Window (Days)
Oxycodone - Oxycodone (mg)	5	2	1.5	7	30	90
Oxycodone - Oxycodone (mg) LA	30	2	1.5	30	30	90

Opioids Without Buprenorphine	Total MME Without Buprenorphine:	2805.000000 mg
On-Therapy Days	Observation Window	
30	90	
Total Days' Supply MME (Definition 1)		75.810811
On-therapy Days MME (Definition 2)		93.500000
Fixed Observation Window MME (Definition 3)		31.166667

With Buprenorphine	Total MME With Buprenorphine:	2805.000000 mg
On-Therapy Days	Observation Window	
Total Days' Supply MME (Definition 1) ⓘ		75.810811
On-therapy Days MME (Definition 2) ⓘ		N/A
Fixed Observation Window MME (Definition 3) ⓘ		N/A

Exporting Data

Of note, the website does not retain any record of information entered

[illegible]

Questions?

Links and Resources

[Link to Online MME Calculator](#)

[Adams MCB, Sward KA, Perkins, ML, Hurley RW, Standardizing Research Methods for Opioid Dose Comparison: The NIH HEAL Initiative Morphine Milligram Equivalent Calculator, PAIN, 10.1097/j.pain.0000000000003529](#)

[Dasgupta N, Wang Y, Bae J, et al. Inches, Centimeters, and Yards: Overlooked Definition Choices Inhibit Interpretation of Morphine Equivalence. Clin J Pain 2021;37:565-574](#)

The MME Calculator is for research purposes only. It is *not* intended for clinical use.

Thank you!