

Opioid Daily Dosage: Total MMEq/day

OntarioMD i4C Dashboard Indicator

For more information regarding OntarioMD Indicators or the EMR i4C Dashboard Specification, please refer to:

<https://www.ontariomd.ca/emr-certification/emr-specification/ontariomd-indicator-library>

1. VERSION HISTORY

INDICATOR VERSION	PUBLICATION DATE	REMARKS
1.0	2019-02-18	<ul style="list-style-type: none"> Initial release
2.0	2019-07-09	<ul style="list-style-type: none"> Added Indicator ID, Indicator Segment ID and Display Indicator Segment properties Changed format and content of Indicator User Help Changed format of Source property Indicator Segment IDs re-sequenced to provide consistency across indicators Indicator Segment Query Criteria clarifies that query result from a segment should produce a count of patients
2.1	2020-06-15	<ul style="list-style-type: none"> Layout of definition file changed to improve readability of indicator segment properties Description and User Help content now contained in separate document. Description and User Help attributes in definition now contain wording to confirm content is kept separately Oxymorphone removed from opioid medication list as this has been discontinued in Canada. Palliative diagnosis coded 'Z515' now written as 'Z51.5' to conform with the way other ICD-9 and ICD-9 codes are identified (using a dot separator between main category and subcategory of diagnosis).

2. INDICATOR DEFINITION

2.1 Indicator Properties

PROPERTY	VALUE
Indicator ID	MED-OPI-003
Indicator Name	Opioid Daily Dosage: Total MMEq/day
Indicator Version	2.1
Date Published	2020-06-15
Description	Indicator description is part of the User Help content, now maintained in a separate document within the i4C Dashboard Indicator Library.
Source	HQO
Source Description	Based on the Opioid Prescribing indicators defined in the technical appendix of the HQO MyPractice: Primary Care Report version 3 (December 2018), as well as the HQO Quality Standards on Opioid Prescribing and Opioid Addiction.
Status	Active
Category	Medication Management
Subcategory	Opioids
Indicator Order	3
Indicator Graphic Type	Pie or Bar Chart
Indicator Graphic Notes	

PROPERTY	VALUE
Indicator User Help	User Help content is now maintained in a separate document within the i4C Dashboard Indicator Library.
Indicator Segment Query Notes	<p>Active Patients are patients identified as 'Active' in the <i>Patient Status</i> data element (DE01.016) within <i>Patient Demographics</i>.</p> <p>Non-palliative care patients are patients WITHOUT any of the following Service Codes billed for the patient: A945, C945, C882, C982, W872, W882, W972, W982, K023, B998, B966, B997, G511, G512 AND WITHOUT Code Z51.5 (<i>ICD-10 Coding System</i>) captured in the <i>Diagnosis/Problem</i> data element (DE06.004) within <i>Ongoing Health</i>.</p> <p>Current opioid prescription is a patient medication recorded in <i>Medications (DE09)</i> AND is not a Past Medication (DE09.017) AND is identified by any of the following text within the brand or generic medication name (DE09.003):</p> <p>"Alfentanil", "Buprenorphine", "Butorphanol", "Codeine", "Dihydrocodeine", "Fentanyl", "Hydrocodone", "Hydromorphone", "Meperidine", "Methadone", "Morphine", "Nalbuphine", "Opium", "Oxycodone", "Pentazocine", "Pethidine", "Remifentanil", "Sufentanil", "Tapentadol", or "Tramadol".</p> <p>Transdermal Fentanyl Patch is a <i>current opioid medication</i> with <i>Medication Name (DE09.003)</i> containing "fentanyl" and <i>Drug Form (DE09.008)</i> is captured as "Patch."</p> <p>Required medication information consists of the following elements that have been captured for a <i>current opioid prescription</i> within <i>Medications (DE09)</i>: <i>Medication Name (DE09.003)</i>, <i>Drug Strength (DE09.006)</i>, <i>Dosage (DE09.007)</i>, <i>Drug Form (DE09.008)</i>, <i>Frequency (DE09.010)</i></p> <p>For Transdermal Fentanyl Patches, <i>Medication Name</i>, <i>Drug Strength</i>, <i>Dosage</i>, and <i>Drug Form</i> elements must all be populated with non-blank or non-null values.</p> <p>For all other opioids, all five data elements must be populated with non-blank or non-null values.</p> <p>Medication Strength is the opioid amount, converted to milligrams (mg), of a <i>current opioid prescription</i>, and is derived from the value and associated units of measure captured in <i>Drug Strength (DE09.006)</i>.</p> <p>Medication Amount is the quantity of pills, patches, etc. to be taken at one time, and is derived from the value captured in <i>Dosage (DE09.007)</i>. If the quantity is expressed as a range, use the maximum value for the <i>medication amount</i>.</p> <p>Medication Dosage = <i>Medication Strength X Medication Amount</i></p> <p>Medication Frequency is the recommended number of times per day the <i>medication dosage</i> is to be taken. For <i>current opioid prescriptions</i> other than <i>transdermal fentanyl patches</i>, frequency is derived from the value captured in <i>Frequency (DE09.010)</i>. If the frequency is expressed as a range, use the maximum value for the <i>medication frequency</i>. If the frequency is captured as "PRN" or "Taken as needed," then <i>medication frequency</i> = zero (0).</p>

PROPERTY	VALUE																																										
	<p>For <i>transdermal fentanyl patches</i>, medication frequency is not required for Morphine Equivalent calculations.</p> <p>Medication Daily Dosage is calculated as <i>medication dosage X medication frequency</i> for <i>current opioid prescriptions</i> other than <i>transdermal fentanyl patches</i>.</p> <p>Morphine Equivalent Conversion Factor is a numeric value for converting the daily dosage of an opioid prescription to an equivalent daily dosage amount for Morphine. The following table lists conversion values to be used for different opioids (as recommended by the McMaster National Pain Centre and U.S.A. Medicare):</p> <table border="1"> <thead> <tr> <th>Opioid</th> <th>Conversion Factor</th> <th>Source</th> </tr> </thead> <tbody> <tr> <td>Morphine</td> <td>1</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Codeine</td> <td>0.15</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Oxycodone</td> <td>1.5</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Hydrocodone</td> <td>1</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Hydromorphone</td> <td>5</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Meperidine</td> <td>0.1</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Tramadol</td> <td>0.1</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Transferral Fentanyl Patch - 12.5 g/h</td> <td>67</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Transferral Fentanyl Patch - 25 mcg/h</td> <td>134</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Transferral Fentanyl Patch - 37.5 mcg/h</td> <td>179</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Transferral Fentanyl Patch - 50 mcg/h</td> <td>224</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Transferral Fentanyl Patch - 75 mcg/h</td> <td>314</td> <td>HQO (McMaster National Pain Centre)</td> </tr> <tr> <td>Transferral Fentanyl Patch - 100 mcg/h</td> <td>404</td> <td>HQO (McMaster National Pain Centre)</td> </tr> </tbody> </table>	Opioid	Conversion Factor	Source	Morphine	1	HQO (McMaster National Pain Centre)	Codeine	0.15	HQO (McMaster National Pain Centre)	Oxycodone	1.5	HQO (McMaster National Pain Centre)	Hydrocodone	1	HQO (McMaster National Pain Centre)	Hydromorphone	5	HQO (McMaster National Pain Centre)	Meperidine	0.1	HQO (McMaster National Pain Centre)	Tramadol	0.1	HQO (McMaster National Pain Centre)	Transferral Fentanyl Patch - 12.5 g/h	67	HQO (McMaster National Pain Centre)	Transferral Fentanyl Patch - 25 mcg/h	134	HQO (McMaster National Pain Centre)	Transferral Fentanyl Patch - 37.5 mcg/h	179	HQO (McMaster National Pain Centre)	Transferral Fentanyl Patch - 50 mcg/h	224	HQO (McMaster National Pain Centre)	Transferral Fentanyl Patch - 75 mcg/h	314	HQO (McMaster National Pain Centre)	Transferral Fentanyl Patch - 100 mcg/h	404	HQO (McMaster National Pain Centre)
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PROPERTY	VALUE		
	Butorphanol	7	Medicare Conversion Factors
	Dihydrocodeine	0.25	Medicare Conversion Factors
	Opium	1	Medicare Conversion Factors
	Oxymorphone	3	Medicare Conversion Factors
	Pentazocine	.037	Medicare Conversion Factors
	Tapentadol	0.4	Medicare Conversion Factors
	<p>Opioid Daily Morphine Equivalent</p> <p>For a <i>Transdermal Fentanyl Patch</i>, <i>opioid daily Morphine Equivalent</i> = medication dosage X Morphine Equivalent conversion factor.</p> <p>For all other opioids, <i>opioid daily Morphine Equivalent</i> = medication daily dosage X Morphine Equivalent conversion factor.</p> <p><i>Opioid Daily Morphine Equivalent</i> cannot be calculated where a <i>Morphine Equivalent conversion factor</i> does not exist for a specific opioid.</p> <p>Opioid Daily Morphine Equivalent Patient Total is the sum of <i>opioid daily Morphine Equivalent</i> values for each <i>current opioid prescription</i>.</p> <p>The <i>opioid daily Morphine Equivalent patient total</i> will only be calculated if: <i>required medication information</i> AND a <i>Morphine Equivalent conversion factor</i> exist for each <i>current opioid medication</i>.</p>		
Patient List Notes	<p>Patient Name is a combination of First Name (<i>DE01.003</i>) and Last Name (<i>DE01.002</i>) data items from <i>Patient Demographics</i>. Names may be displayed either as separate columns or concatenated into one column.</p> <p>Unique Patient Identifier is any data item from <i>Patient Demographics</i> that can be used by a physician or clinic to uniquely identify a patient when displayed. Examples include Health Card Number (<i>DE01.008</i>) or Chart Number (<i>DE01.012</i>).</p> <p>Patient Date of Birth is captured into <i>Patient Demographics</i> as Date of Birth (<i>DE01.007</i>).</p> <p>Patient Age is a calculated data item representing the difference between the current date and Date of Birth (<i>DE01.007</i>) from <i>Patient Demographics</i>. Age should be displayed in years.</p>		

PROPERTY	VALUE
	<p>Patient Phone Number is the preferred phone number for contacting a patient and may include Residence Phone (<i>DE02.007</i>), Cell Phone (<i>DE02.008</i>) or Work Phone (<i>DE02.009</i>) from <i>Patient Address</i>.</p> <p>Current Opioid Medications is a concatenated listing of medication names (<i>DE09.003</i>), along with (if possible) either the <i>Prescription Written Date (DE09.001)</i> or <i>Start Date (DE09.002)</i> of <i>current opioid prescriptions</i>.</p> <p>Opioid MMEq Patient Total is the <i>opioid daily Morphine Equivalent patient total</i> that has been calculated for the patient.</p>

2.2 Indicator Segment Properties

Indicator Segment ID	Indicator Segment Label	Display Indicator Segment	Indicator Segment Query Criteria	Patient List Criteria
1	Total MMEq/day < 50	Yes	<p>COUNT OF:</p> <p>Active, non-palliative care patients WITH one or more current opioid prescriptions</p> <p>WHERE each opioid prescription is documented with required medication information for calculating a medication daily dosage</p> <p>AND WHERE each opioid prescription has an existing Morphine Equivalent conversion factor</p> <p>AND WITH Opioid Daily Morphine Equivalent Patient Total < 50</p>	<p>Mandatory</p> <p>Patient Name Unique Patient Identifier Patient Date of Birth</p> <p>Optional</p> <p>Patient Age Patient Phone Number Current Opioid Medications Opioid MMEq Patient Total</p>
2	50 <= total MMEq/day <90	Yes	<p>COUNT OF:</p> <p>Active, non-palliative care patients WITH one or more current opioid prescriptions</p> <p>WHERE each opioid prescription is documented with required medication information for calculating a medication daily dosage</p> <p>AND WHERE each opioid prescription has an existing Morphine Equivalent conversion factor</p> <p>AND WITH Opioid Daily Morphine Equivalent Patient Total >= 50 and < 90</p>	<p>Mandatory</p> <p>Patient Name Unique Patient Identifier Patient Date of Birth</p> <p>Optional</p> <p>Patient Age Patient Phone Number Current Opioid Medications Opioid MMEq Patient Total</p>

Indicator Segment ID	Indicator Segment Label	Display Indicator Segment	Indicator Segment Query Criteria	Patient List Criteria
3	Total MMEq/day >= 90	Yes	COUNT OF: Active, non-palliative care patients WITH one or more current opioid prescriptions WHERE each opioid prescription is documented with required medication information for calculating a medication daily dosage AND WHERE each opioid prescription has an existing Morphine Equivalent conversion factor AND WITH Opioid Daily Morphine Equivalent Patient Total >= 90	Mandatory Patient Name Unique Patient Identifier Patient Date of Birth Optional Patient Age Patient Phone Number Current Opioid Medications Opioid MMEq Patient Total
4	Prescription details not available	Yes	COUNT OF: Active, non-palliative care patients WITH one or more current opioid prescriptions AND WHERE one or more opioid prescriptions are not documented with required medication information for calculating a medication daily dosage	Mandatory Patient Name Unique Patient Identifier Patient Date of Birth Optional Patient Age Patient Phone Number Current Opioid Medications

Indicator Segment ID	Indicator Segment Label	Display Indicator Segment	Indicator Segment Query Criteria	Patient List Criteria
5	Conversion factor not available	Yes	COUNT OF: Active, non-palliative care patients WITH one or more current opioid prescriptions WHERE each opioid prescription is documented with required medication information for calculating a medication daily dosage AND WHERE one or more opioid prescriptions do not have an existing Morphine Equivalent conversion factor	Mandatory Patient Name Unique Patient Identifier Patient Date of Birth Optional Patient Age Patient Phone Number Current Opioid Medications