### MEASURE #2: ACUTE MEDICATION PRESCRIBED FOR CLUSTER HEADACHE

#### Measure Description
Percentage of patients age 18 years old and older with a diagnosis of cluster headache (CH) who were prescribed a guideline recommended acute medication for cluster headache within the 12-month measurement period.

#### Measure Components

<table>
<thead>
<tr>
<th>Numerator Statement</th>
<th>Patients who were prescribed a guideline recommended* acute medication for cluster headache within the 12 month measurement period.</th>
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<tbody>
<tr>
<td></td>
<td>* Guideline recommended acute medications for CH include the following but are not limited to: Oxygen 100%, Sumatriptan SC, Sumatriptan IN, Zolmitriptan IN, DHE (IV, IM, SC, IN)(^1,2,3)</td>
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<td></td>
<td>Note: The above list of medications/drug names is based on clinical guidelines and other evidence and may not be all-inclusive or current. Physicians and other health care professionals should refer to the Food and Drug Administration’s (FDA) web site page entitled “Drug Safety Communications” for up-to-date drug recall and alert information when prescribing medications.</td>
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</table>

| Denominator Statement | All patients age 18 years old and older with a diagnosis of cluster headache. |

<table>
<thead>
<tr>
<th>Denominator Exceptions</th>
<th>Exceptions:</th>
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<tbody>
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<td></td>
<td>• Medical exception for not prescribing a guideline recommended acute CH medication (i.e., guideline recommended medication is medically contraindicated or ineffective for the patient; patient reports no CH attacks within the past 12 months; CH are sufficiently controlled with over the counter [OTC] medications; patient is already on an effective prescribed acute CH medication)</td>
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<td>• Patient exception for not prescribing a guideline recommended acute CH medication (i.e., patient declines any prescription of an acute CH medication)</td>
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<td>• System exception for not prescribing a guideline recommended acute CH medication (i.e., patient does not have insurance to cover the cost of any prescribed an acute CH medications)</td>
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<table>
<thead>
<tr>
<th>Supporting Guideline &amp; Other References</th>
<th>The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines or evidence papers and represent the evidence base for the measure:</th>
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<td>• As first choice, acute attacks of CH should be treated with the inhalation of 100% oxygen with at least 7 L/min over 15 minutes (Class II trials) or with the subcutaneous injection of 6 mg sumatriptan or the intranasal application of zolmitriptan 5 mg. (Class I trials) As second choice, sumatriptan 20 mg nasal spray can be used (Class I trial) with minor efficacy or more side effects. Prophylaxis of CH should be first tried with verapamil in a daily dose of at least 240 mg (maximum dose depends on efficacy or tolerability; electrocardiogram [ECG] controls] obligatory with increasing doses). Although no Class I or II trials are available, steroids are clearly effective in CH. Therefore, the use of at least 100 mg oral up to 500 mg intravenous per day methylprednisone (or equivalent corticosteroid) over 5 days (then tapering down) is recommended. (Level A)(^1)</td>
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</table>

Intranasal lidocaine (4%) can be tried in acute CH attacks if Level A medication is ineffective or contraindicated. Oral zolmitriptan 10 mg is effective in some patients (Class I trial), but high dose produces many side effects and limits practical use. (Level B)^1

Methysergide* and lithium are drugs of second choice if verapamil is ineffective or contraindicated. Corticosteroids can be used for short courses where bouts are short or to help establish another medicine. Topiramate is promising, but only open trials exist at this point. Melatonin is useful in some patients. Except for lithium, the maximum dose depends on efficacy and tolerability. Ergotamine tartrate is recommended for short term prophylaxis. (Class III studies) In spite of positive Class II studies, pizotifen and intranasal capsaicin should not be used because of side effects. (Level B)^1

Acute abortive treatment of CH: Sumatriptan SC should be offered to patients for acute treatment of CH (Level A); Sumatriptan NS should be considered for acute treatment of CH. (Level B) Zolmitriptan NS should be offered to patients for acute treatment of CH. (Level A) Oral zolmitriptan should be considered for acute treatment of episodic CH. (Level B) One hundred percent oxygen should be offered for acute treatment of CH. (Level A)^2

Although there are no controlled trials of injectable DHE, clinical experience has demonstrated that IV administration provides prompt and effective relief of CH within 15 minutes.^3

2 American Academy of Neurology. Francis GJ, Becker WJ, Pringsheim TM. Acute and Preventive Pharmacologic Treatment of Cluster Headache Neurology 2010; 75;463

*May not be available in the United States.

Rationale for the Measure
CH is under diagnosed and undertreated. Although CH has a much lower prevalence than many other types of headache^2, it is often considered the most severe headache pain. Suicidality ideations in one study were as high as 55% of the study population.^3

Gap in Care
There is a gap in care in the diagnosis and appropriate treatment of CH. In 2000, Klapper, et al. using a web-based survey noted an average time delay of 6.6 years before a proper diagnosis of CH was made in sample of 789 US respondents. Most notably is gap on the use oxygen treatment for CH. Despite oxygen being known as a fast acting treatment for cluster headache it is not often reimbursed. Center for Medicare and Medicaid Services (CMS) has determined that the evidence does not demonstrate that the home use of oxygen to treat CH improves health outcomes in Medicare beneficiaries with CH.^4

Opportunity for Improvement
Appropriate treatment for patients diagnosed with CH could lead to decreased suffering and increased quality of life. CH leads to major socioeconomic impacts on patients as well as society due to direct healthcare costs and indirect costs caused by loss of working capacity. ^5
Approximately 20% of CH patients have lost a job secondary to CH, while another 8% are out of work or on disability secondary to their headaches.\(^3\)


### Measure Designation

| Measure purpose                  | • Quality improvement  
|                                | • Accountability  
| Type of measure                 | • Process  
| Level of Measurement            | • Individual practitioner  
| Care setting                    | • Inpatient  
|                                  | • Outpatient visits  
| Data source                     | • Electronic health record (EHR) data  
|                                  | • Administrative Data/Claims (inpatient or outpatient claims)  
|                                  | • Administrative Data/Claims Expanded (multiple-source)  
|                                  | • Paper medical record  

### Technical Specifications: Administrative/Claims Data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible denominator criteria. The specifications listed below are those needed for performance calculation.

#### Denominator (Eligible Population)

**ICD-9 or ICD-10 Diagnosis Codes:**

- ICD-9: 339.00 (Cluster headache syndrome, unspecified) to ICD-10: CD-9-CM 339.0 is a non-specific code, that is, there are codes below this code that have a greater level of detail. One of these child codes will contain a conversion record;
- 339.01 (episodic cluster headache) to ICD-10: G44.019 (Episodic cluster headache, not intractable);
- 339.02 (Chronic cluster headache) to ICD-10: G44.029 (Chronic cluster headache, not intractable)

**AND**

**CPT® Evaluation and Management Service Codes:**

- **Outpatient:** 99201-5, (Office or other outpatient visit-New Patient);
- 99211-5 (Office or other outpatient visit-Established Patient); 99241-5 (Office or Other Outpatient Consultation-New or Established Patient);
- **Inpatient:** 99221-99223 (Initial Hospital Care); 99231-99233 (Subsequent Hospital Care);
- 99238-99239 (Hospital Discharge); 99251-99255 (Initial Inpatient Consultation).