Peak Flow Meters

**Policy**

*Please see amendment for Pennsylvania Medicaid at the end of this CPB.*

Aetna considers standard mechanical peak flow meters and spacers for metered-dose inhalers medically necessary durable medical equipment (DME) for members with asthma, bronchitis, emphysema, or other obstructive pulmonary conditions.

Aetna considers electronic peak flow meters experimental and investigational because there is inadequate evidence to show that electronic peak flow meters (e.g., the PeakLog Peak Flow Chronologger and the AirWatch Peak Flow Monitoring System) are associated with superior health benefits when compared to standard mechanical peak flow meters.

**Note:** Peak flow meters should not be used to diagnose chronic obstructive pulmonary disease.

**Background**

**Policy History**

- Last Review: 01/28/2021
- Effective: 10/20/1995
- Next Review: 01/13/2022

**Definitions**

**Additional Information**

[Clinical Policy Bulletin](https://aetnet.aetna.com/mpa/cpb/1_99/0059.html)
Peak flow meters have been prescribed to patients with asthma, chronic obstructive pulmonary disease (COPD), and other respiratory diseases for monitoring the severity of their disease and their response to therapy at home. Home monitoring of peak expiratory flow rate was identified as an important component of asthma management by the National Heart, Lung and Blood Institute (NHLBI) in its Expert Panel Report on asthma management. The peak expiratory flow meter is intended to provide the physician with another measure of the level of asthma control and encourage patient adherence by giving the patient a sense of control and participation in self care.

A standard peak flow meter allows for simple measurements of peak expiratory flow. It consists of a spring-loaded pivoted vane which rotates inside a drum; a forced expiration through the inlet rotates the vane to an extent proportional to the maximum flow developed. The scale of the instrument is calibrated in terms of flow.

A smaller version of the peak flow meter is similar to the standard peak flow meter except that it consists of a spring-loaded piston; a forced expiration through the inlet moves the piston in proportion to the maximum flow developed, and the piston moves a small pointer along a linear calibrated scale of flow. The NHLBI Expert Panel Report guidelines on asthma management recommend that the physician gives the patient written instructions on interpreting the peak flow meter (such as what levels are acceptable, what levels require use of inhalers or other treatments, and what levels indicate that one should seek emergency care).

Both the AirWatch System and the PeakLog Peak Flow Chronologger provide electronic measurements of peak expiratory flow rate (PEFR) as well as forced expiratory volume in 1 second (FEV-1). These devices store the result, so the patient does not have to record the results and time of the measurement in an asthma diary. The PeakLog includes a
program that allows the physician to graphically display the results of peak flow monitoring on a computer. The readings from the AirWatch System can be transmitted electronically over the phone to the patient's physician. These electronic peak expiratory flow rate systems are considered unproven for the management of patients with asthma, COPD, or other expiratory diseases because there is inadequate evidence that they offer clinically significant advantages over standard peak expiratory flow meters. They have no demonstrated advantages over standard peak flow meters in the diagnosis and management of patients with respiratory diseases, and merely offer an alternative means for measuring and recording peak flow meter results.

Other brands of electronic peak flow meters are being marketed, including a mini-Wright based peak flow meter (VMX Mini-Log), and the EDC-spirometer (Micro Medical, U.K.). Studies have reported on the accuracy and precision of these meters, but no studies have demonstrated that these electronic peak flow meters offer clinically significant benefits over standard peak flow meters.

First, electronic recording of peak expiratory flow rate does not obviate the need for the patient to maintain an asthma diary. Patients are still required to periodically record not just peak flow meter results, but also their symptoms, use of medications, asthma triggers, etc. Second, there is no clinically significant advantage of transmitting peak expiratory flow rate results electronically. The patient can just as easily provide readings of results to the physician over the phone, if necessary. Third, although an implied benefit of electronic peak flow monitoring systems over standard peak flow meters is improved patient compliance, there are no studies demonstrating that these electronic peak flow monitoring systems do, in fact, improve compliance over standard peak flow meters. Fourth, there are no studies that demonstrate that use of electronic peak flow monitoring systems improve outcomes compared to use of standard peak flow meters.
Finally, the manufacturers claim that, using office spirometry as the standard, electronic peak flow monitoring systems have been shown to provide more accurate measures of PEFR than standard mechanical peak flow meters. They also emphasize that only electronic peak flow monitors measure FEV-1 in addition to PEFR. There is no evidence that the claimed improvement in accuracy of electronic peak flow monitors over standard peak flow meters significantly affect the diagnosis, management, or outcomes of patients with respiratory diseases. Nor is there evidence that the clinical management of the patient with asthma or other respiratory diseases would be significantly affected by knowledge of FEV-1 in addition to PEFR.

The Institute for Clinical Systems Improvement (ICSI)'s clinical practice guidelines on "Diagnosis and management of chronic obstructive pulmonary disease" (2011) states that peak flow meters should not be used to diagnose chronic obstructive pulmonary disease.

### CPT Codes / HCPCS Codes / ICD-10 Codes

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<thead>
<tr>
<th>Code</th>
<th>Code Description</th>
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<tr>
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<td><em>Information in the [brackets] below has been added for clarification purposes. Codes requiring a 7th character are represented by &quot;+&quot;.</em></td>
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<tr>
<td></td>
<td><strong>HCPCS codes covered if selection criteria are met:</strong></td>
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<tr>
<td>A4614</td>
<td>Peak expiratory flow rate meter, hand held</td>
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<tr>
<td>A4627</td>
<td>Spacer, bag or reservoir, with or without mask, for use with metered dose inhaler</td>
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<tr>
<td>S8096</td>
<td>Portable peak flow meter</td>
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The above policy is based on the following references:


13. Institute for Clinical Systems Improvement (ICSI). Diagnosis and management of chronic obstructive
pulmonary disease (COPD). Bloomington, MN: Institute for Clinical Systems Improvement (ICSI); March 2011.


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Amendment to
Aetna Clinical Policy Bulletin Number: 0059 Peak Flow Meters

There are no amendments for Medicaid.