

Patient and Provider Resource on Liquid Oxygen

- [Liquid oxygen](#) is a form of supplemental oxygen that is the standard of care for persons who experience a drop in oxygen levels when moving around (ambulatory oxygen desaturation) that is not adequately controlled with tanks or portable oxygen concentrators (POCs). Recent [clinical practice guidelines](#) from the American Thoracic Society offer a recommendation for ambulatory liquid-oxygen use in patients who are mobile outside the home and require >3 Liters/min of continuous-flow oxygen during exertion.
- Liquid oxygen is oxygen that has been super-cooled until it becomes a liquid and is then stored in a large metal reservoir tank; smaller portable canisters are filled as needed from this large tank. When liquid oxygen is exposed to air, it changes to a gaseous form. Compared to compressed gas cylinders (E tanks), portable liquid oxygen canisters can hold more oxygen due to its concentrated form and, therefore, will last longer. The smaller portable devices are also capable of providing high continuous flow (4->10 Liters/min) and are lighter weight. For all these reasons, portable liquid oxygen canisters are far more manageable for patients. POCs do not provide more than 3 Liters/min and commonly only provide pulse-flow. Heavier compressed gas canisters can provide high continuous flow but only last 1-2 hours depending on their size and oxygen flow rate.
- Subsequent to the implementation of competitive bidding for supplemental oxygen under Medicare over a decade ago, there has been a precipitous drop in the use and availability of liquid oxygen even as the demand for liquid oxygen remains unchanged. Reimbursement rates under competitive bidding have proved problematic for the entire oxygen market, but especially so for liquid oxygen. Liquid oxygen requires unique delivery and servicing considerations that make it more expensive to provide than other forms of supplemental oxygen, yet, under competitive bidding, it is reimbursed at the same level. Consequently, many durable medical equipment (DME) companies stopped providing liquid oxygen, despite their obligation to do so under competitive bidding, due to their inability to make a profit.
- Competitive bidding is [currently suspended](#) for supplemental oxygen, and, as a result, certain forms of supplemental oxygen have seen an increase in reimbursement rates. After several years under competitive bidding, however, the infrastructure for providing liquid oxygen has collapsed to the point where very few, if any, companies are willing to provide it.
- As a result of the decline in liquid oxygen, many patients for whom liquid oxygen would be the most clinically appropriate course of treatment have been forced to go without.

Further, a number of patients who have been able to benefit from liquid oxygen for many years are now seeing it being taken away from them, replaced by other forms of oxygen that are suboptimal for their clinical and quality of life needs.

- In response to this grave patient access issue, many patient and provider organizations, including the American Lung Association, have worked to garner awareness in Congress and at the Centers for Medicare and Medicaid Services (CMS) of this crisis in the hopes of securing a lasting solution that can bring relief to the many lung disease patients across the country who are unable to get the level of care they need to manage their condition and maintain quality of life.
- To this end, the American Lung Association and its partners are gathering patient and provider testimonials that can help convey the extent of the problem to Congress and CMS. Documentation from patients and their providers of the inability to acquire liquid oxygen despite clinical need, as well as documentation from patients and their providers of the removal of liquid oxygen in the absence of a change in clinical circumstances that could justify such a shift, all greatly help to demonstrate the problem at hand and the need for urgent intervention.