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Dear Doctor,

Your patient with cluster headache has asked about home oxygen use for acute attacks, but you may not be familiar with the precise information required to successfully obtain home oxygen for use in this way. Thank you for taking the time to learn.

We have worked with headache specialists and other advocacy groups to provide you with a clear, concise guide to helping your patient gain access to this affordable, safe, effective treatment.

Here are some important things for you and your patient to know.

Insurance Coverage:

If a patient is on Medicaid or Medicare insurance, they will not get oxygen covered by their insurance. Do not prescribe oxygen with an attempt to get it covered by Medicaid or Medicare; this will not work and will only frustrate provider, staff, and patient.

Self-pay does work.

The actual cash cost can often be shouldered by the patient, depending on the state. E Tanks typically cost \$10-15 each. Welding or nonmedical grade industrial oxygen is almost the same cost as medical oxygen, less pure, without the same inspection of tanks, and is delivered without regulators to provide appropriate flow rates. Patients who pay cash should be strongly encouraged to buy medical oxygen. Details on the differences between nonmedical and medical grade oxygen, including costs are included in the accompanying article by O'Brien et al.

Writing the Prescription:

“Home Oxygen for Cluster Headache”

Sig and Rate: Sit up and lean forward and breathe deeply 10-15 L/minute for up to 20 minutes per attack

Route: Non-rebreather face mask, please include full mask and tubing

Hours per day of usage: PRN to be determined by number of attacks per day

Number of months service needed: 12

Under the comments section in the EMR, add the following:

“This patient with cluster headache needs a large tank for home and a portable tank for work and leaving the house. The oxygen therapy is medically necessary to abort cluster headache attacks and improve functioning. Each treatment is to give 10-15 L/minute for 1-2 hours (usual duration 20 minutes). Please give patient tubing and a full re-breather mask.”



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Correct CPT codes:

- E0424, oxygen system for cluster headache, consisting of a stationary compressed gaseous oxygen system rental with regulator, flow meter, mask, and tubing. Request the rebreathing mask.
- E0441, stationary oxygen without equipment, 1 month's supply = 1 Unit
- E0443, portable oxygen tank with cart for moving, 1 month's supply = 1 Unit

The U.S. ICD-10 diagnosis code for cluster headache is G44.009, but this is for the “not intractable” group. Other cluster codes include episodic cluster as G44.019 and chronic cluster G44.029. Because these are likely to be very disabled patients, use the ICD-10 diagnosis codes as follows:

- Episodic cluster headache, intractable G44.011
- Chronic cluster headache, intractable G44.021
- Intractable cluster headache, unspecified chronicity pattern G44.001

O2 Saturation Level is unnecessary.

If the provider asks for the patient’s oxygen saturation level, use the following to explain why this is not necessary.

“This patient has been diagnosed with Cluster Headache, which is a primary headache disorder, not a pulmonary disease. It is not characterized by low oxygen saturation levels. This patient has normal O2 saturation. The use of oxygen by this patient is for the acute treatment of Cluster Headache. Continuous use of oxygen is not clinically warranted.”

Smoking doesn’t have to be a contraindication for use.

Please consider this recommendation from Peter Goadsby, M.D.

“One caveat would be the use of oxygen in patients who smoke, for whom there would be a perceivable incendiary risk with open flames near the cylinders. Many cluster headache patients are known to be smokers (67% in a large study), and it would be unfortunate to deny this potentially very effective treatment to a large proportion of the cluster headache population. Therefore, smokers were not excluded from the study but were instructed not to have any smoking materials near the cylinders. None of the patients reported a smoking-related adverse event. Therefore, we can conclude that patients take the responsibility to keep the cylinders away from smoking and naked flames and that the benefit of oxygen as an acute attack therapy outweighs the incendiary risk in this population.”

Yours truly,

Tammy Rome, LPC, MA, NBCC
President, Cluster Headache Support Group



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References:

1. Robbins MS, Starling AJ, Pringsheim TM, Becker WJ, Schwedt TJ. Treatment of cluster headache: The American Headache Society Evidence-Based guidelines. *Headache*. 2016;56:1093-1106.
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8. Rozen TD. High oxygen flow rates for cluster headache. *Neurology*. 2004; 63:593.
9. CMS.gov
10. <http://www.icd10data.com>



Home Oxygen Prescription for Cluster Headache

diagnosis (ICD-10) Code:

- G44.001: Cluster headache syndrome, unspecified, intractable
- G44.009: Cluster headache syndrome, unspecified, not intractable
- G44.011: Episodic cluster headache, intractable
- G44.019: Episodic cluster headache, not intractable
- G44.021: Chronic cluster headache, intractable
- G44.029: Chronic cluster headache, not intractable

HCPCS Code(s):

- E0424: Stationary compressed gaseous oxygen system, rental; includes container, contents, regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing
- E0441: Stationary oxygen contents, gaseous, 1 month's supply = 1 unit
- E0443: Portable oxygen contents, gaseous, 1 month's supply = 1 unit
- Other(s): _____

Route: Non-rebreather face mask. Please include full mask and tubing.

Hours per day of usage: PRN to be determined by the number of attacks per day.

Duration: 12 months Other: _____

Instructions for use: Sit up and lean forward.
Breathe deeply at 10-15L/minute for up to 30 minutes per attack

Comments: *This patient with cluster headache needs a large tank for home and a portable tank for work and/or leaving the home. Their oxygen therapy is medically necessary to abort cluster headache attacks and improve functioning. Each treatment is to give 10-15L/min for 1-2 hours (usual duration 20 minutes). Please provide patient with oxygen tubing and non-rebreather face mask.*

Prescriber information:

Name: _____ License Number: _____

Contact Person: _____ NPI: _____

Practice Address: _____

Phone number: _____ Fax number: _____

Prescriber Signature: _____ Date: _____

Views and Perspectives

Prescribing Oxygen for Cluster Headache: A Guide for the Provider

Stewart J. Tepper, MD, FAHS; Jessica Duplin, RN; Barbara Nye, MD; Deborah E. Tepper, MD

Background.—Oxygen is the standard of care for acute treatment of cluster headache. CMS, the US Centers for Medicaid and Medicare Services, has made the indefensible decision to not cover oxygen for cluster headache for patients with Medicaid and Medicare insurance, despite the evidence and professional guidelines. Commercial insurance generally covers oxygen for cluster headache.

Objective.—This is a “how-to” guide for successfully prescribing oxygen in the US.

Summary.—Prescription information is provided that can be incorporated as dot phrases, smart sets, or other standard templates for prescribing oxygen for cluster patients. In many states, oxygen is affordable and can be prescribed for Medicaid and Medicare patients who wish to pay cash. Welding or nonmedical grade industrial oxygen is almost the same cost as medical oxygen. However, it is less pure, lacks the same inspection of tanks, and is delivered without regulators to provide appropriate flow rates. Patients who pay cash should be strongly encouraged to buy medical oxygen.

Key words: cluster headache, oxygen, acute headache treatment, cluster guidelines

(*Headache* 2017;57:1428-1430)

INTRODUCTION

Oxygen is the standard of care for acute treatment of cluster headache, in the US and worldwide.¹⁻³ As noted in the American Headache Society 2016 guidelines for treatment of cluster headache,¹ oxygen has been shown to be effective in two randomized controlled trials, with Level A evidence.

Prescribing oxygen for acute treatment of cluster headache is a skill, since oxygen does not come with the usual prescribing medication information.

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This is a “how-to” guide for successfully prescribing oxygen in the US.

COVERAGE

The first issue at the time of this writing (August 2017) is that CMS, the US Centers for Medicaid and

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Advisor: Acorda, Alder, Allergan, Amgen, ATI, BioVision, Charleston Laboratories, Dr. Reddy's, Electrocore, Eli Lilly, eNeura, Kimberly Clark, Pernix, Pfizer, Scion Neurostim, Teva, Zosano;

Stock options: ATI;

Salary: Dartmouth-Hitchcock Medical Center, American Headache Society;

Royalties: Springer. Jessica Duplin: No disclosures.

Barbara Nye: Advisor, Pernix.

Deborah E. Tepper: Honoraria, American Headache Society.

Medicare Services, has made the indefensible decision to not cover oxygen for cluster headache for patients with Medicaid and Medicare insurance, despite two positive randomized controlled trials,^{4,5} including a lead article published in 2009 in *JAMA*,⁵ despite oxygen being listed as the acute medication of choice for cluster headache and reimbursed for cluster headache in every professional cluster headache guidelines,¹⁻³ despite its superior safety and efficacy, and despite it being available in every other civilized country on earth. The exact decision from CMS reads, “The NCD [National Coverage Determination] for the Home Use of Oxygen to Treat Cluster Headache (CH), released by CMS in January 2011, concludes that the currently available evidence does not demonstrate that the home use of oxygen to treat CH improves health outcomes among Medicare beneficiaries.”⁶ This flies in face of the fact that numerous cluster headache sufferers are so disabled that they end up on Medicaid or Medicare. Therefore, if a patient is on Medicaid or Medicare insurance, they will not get oxygen covered by their insurance. Do not prescribe oxygen with an attempt to get it covered by Medicaid or Medicare; this will not work and will only frustrate provider, staff, and patient.

The actual cash cost can often be shouldered by the patient, depending on the state. An accompanying article in this issue of headache includes a list of states and the approximate cost of oxygen for cluster patients in those states.⁷

Welding or nonmedical grade industrial oxygen is almost the same cost as medical oxygen, less pure, without the same inspection of tanks, and is delivered without regulators to provide appropriate flow rates. Patients who pay cash should be strongly encouraged to buy medical oxygen. Details on the differences between nonmedical and medical grade oxygen, including costs are included in the accompanying article by O’Brien et al.⁷

If the patient has commercial insurance, almost all of them cover oxygen when prescribed correctly. Again, see the accompanying article by O’Brien et al for the economic and social details.⁷ The important fact is that oxygen is relatively easily available as first-line therapy with coverage by commercial insurance.

HOW TO PRESCRIBE OXYGEN FOR CLUSTER HEADACHE

Oxygen should be ordered as either a medication or an unlisted durable medical equipment prescription, either of which would be entered in the electronic medical record (EMR) under a medication order tab. Another way to enter the oxygen prescription is as “Home Oxygen.”

Usually the company supplying the oxygen will decide on the appropriate size of the tank after talking to the patient. Complicating this is the fact that different states and regions have different names for the tanks, and different tendencies to recommend different tanks. For example, the B tank that is often recommended in New England is also called the M-6. In the southeast, an E tank, also called M-24, is usually recommended and is much bigger (see Figure 1 in Ref. 7). For this reason, a provider may simply wish to prescribe a “large tank” and let the supplier and patient choose.

Headache Medicine specialists typically request that patients be given both a large tank as well as at least one portable tank with which they can travel. In active and hiking patients, multiple small tanks can be prescribed.

The flow rate required for oxygen effectiveness can be high.⁸ For this reason, the prescription needs to be explicit about the potential need for flow as high as 15 L/minute.

The prescription should read:

“Home Oxygen for Cluster Headache”

Sig and Rate: Sit up and lean forward and breathe deeply 10-15 L/minute for up to 20 minutes per attack

Route: Non-rebreather face mask, please include full mask and tubing

Hours per day of usage: PRN to be determined by number of attacks per day

Number of months service needed: 12

Under the comments section in the EMR, add the following:

“This patient with cluster headache needs a large tank for home and a portable tank for work and leaving the house. The oxygen therapy is medically necessary to abort cluster headache attacks and improve

functioning. Each treatment is to give 10-15 L/minute for 1-2 hours (usual duration 20 minutes). Please give patient tubing and a full re-breather mask.”

This order is then printed and faxed to the provider or patient’s local oxygen supply company. They will often send the provider one of their order forms to sign after the information has been entered into their system and they have contacted and evaluated the patient’s needs.

Some commercial insurers use obstacles to avoid coverage, even though oxygen is inexpensive and safe. They will sometimes ask for a CPT code for use of oxygen for cluster headache. Use the following CPT codes:⁹

E0424, oxygen system for cluster headache, consisting of a stationary compressed gaseous oxygen system rental with regulator, flow meter, mask, and tubing. Request the rebreathing mask.

E0441, stationary oxygen without equipment, 1 month’s supply = 1 Unit

E0443, portable oxygen tank with cart for moving, 1 month’s supply = 1 Unit

The US ICD-10 diagnosis code for cluster headache is G44.009, but this is for the “not intractable” group. Other cluster codes include episodic cluster as G44.019 and chronic cluster G44.029. Because these are likely to be very disabled patients, use the ICD-10 diagnosis codes¹⁰ as follows:

Episodic cluster headache, intractable G44.011

Chronic cluster headache, intractable G44.021

Intractable cluster headache, unspecified chronicity pattern G44.001

SUMMARY

Prescribing oxygen for cluster headache is relatively straightforward for patients with commercial insurance. Reproducible phrases, smart sets, and dot phrases in the electronic medical record can expedite the prescription, and the above phrases are provided for use. Locate the oxygen provider in the region in case there are problems in filling the prescription.

Cost of oxygen for cluster headache is inexpensive enough in many states to allow some patients

to pay the cash cost. Welding or nonmedical grade industrial oxygen and medical oxygen are close to the same cost, medical oxygen is more pure, and welding oxygen tanks are not subjected to the same inspection. Medical oxygen is delivered with regulators allowing for appropriate flow rates, so patients should be strongly encouraged to pay the small extra amount for medical oxygen when possible.

Oxygen is the global and US standard of care for first-line acute treatment of cluster headache. Providing oxygen for cluster headache patients is a clinical obligation without terrible burden to the provider, which can result in excellent clinical outcomes and reduced disability for the patient.

REFERENCES

1. Robbins MS, Starling AJ, Pringsheim TM, Becker WJ, Schwedt TJ. Treatment of cluster headache: The American Headache Society Evidence-Based guidelines. *Headache*. 2016;56:1093-1106.
2. May A, Leone M, Afra J, et al. EFNS task force. EFNS guidelines on the treatment of cluster headache and other trigeminal-autonomic cephalalgias. *Eur J Neurol*. 2006;13:1066-1077.
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