

Dental Clinical Policy: Inhalation of Nitrous Oxide-Oxygen

Reference Number: CP.DP.21

Last Review Date: 12/24

[Coding Implications](#)

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

Description

Inhalation of nitrous oxide and oxygen is considered safe and effective when properly administered by trained individuals. Nitrous oxide and oxygen inhalation is a safe and effective method to help reduce or minimize anxiety, fear and pain during the delivery of dental services, as well as to control the gag reflex, particularly for children and persons with special health care needs. In addition, it may also reduce movement interfering with dental treatment, increase tolerance to pain or lengthy procedures, and enhance patient communication and cooperation. The use of nitrous oxide/oxygen should be based on the treatment needs and mitigating safety factors of each individual patient.

Policy/Criteria

- I. It is the policy of Envolve Dental Inc.® that inhalation of nitrous oxide and oxygen is **medically necessary** when any of conditions A through E are met and none of the contraindications in F are present:
 - A. When a patient is fearful, anxious, or unruly;
 - B. When treating persons with special health care needs;
 - C. When a patient has an interfering gag reflex;
 - D. When profound anesthesia cannot be obtained;
 - E. When a patient is undergoing extensive or lengthy procedures;
 - F. When none of the following contraindications are present:
 1. When a patient has history of previous untoward reaction to nitrous oxide;
 2. When a patient has chronic obstructive pulmonary disease;
 3. When a patient has a respiratory disease that interferes with or inhibits air flow;
 4. When a patient has a recent history of a middle ear infection or surgery;
 5. When severe emotional disturbance or drug dependency is present;
 6. When a patient is in the first trimester of pregnancy;
 7. When a patient is treated with bleomycin sulfate;
 8. When a patient has a methylenetetrahydrofolate reductase deficiency;
 9. When a patient has a vitamin B-12 deficiency;
 10. When a patient has a condition with increased intracranial pressure;
 11. When a patient has a pneumothorax/bullae;
 12. When a patient has a bowel obstruction;
 13. When a patient has claustrophobia;
 14. When a patient has nasal obstruction;
 15. When a patient has a recent history of retinal surgery;
 - G. Required documentation to support medical necessity include the following:
 1. Clinical chart notes documenting behavior or conditions listed in the indications for use of nitrous oxide/inhalation;
 2. **OR** in the alternative to the above requirement for specified, inclusion of a qualifying ICD-10 diagnosis code (located below) in Boxes 34 and 34a on the 2012 or later ADA claim form or on the claim submitted using the Envolve Dental Provider Web Portal;
 3. In all instances, documentation of gas flow rate, concentration, and duration of each concentration, as well as the patient's behavior response to the use of nitrous oxide must also be retained in the patient record and are subject to patient chart audit.

Coverage Limitation/Exclusions

One D9230 per member per date of service, subject to state regulations.

Coding Implications

This clinical policy references Current Dental Terminology (CDT®). CDT® is a registered trademark of the American Dental Association. All CDT codes and descriptions are copyrighted 2024, American Dental Association. All rights reserved. CDT codes and CDT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

Retrospective review/analysis or fraud, waste and abuse initiatives that identify mis-coding (upcoding) resulting in higher reimbursement than allowed for the correctly coded service, or does not provide documentation supporting performing and/or completing claimed services may result in the recoupment of the identified monetary variance by any of the following means: a) from the payment for other claimed services; or b) directly from the provider.

CDT® Codes	Description
D9230	Inhalation of nitrous oxide/analgesia, anxiolysis

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
F06.4	Anxiety disorder due to known physiological condition
F40.00	Agoraphobia, unspecified
F40.01	Agoraphobia with panic disorder
F40.02	Agoraphobia without panic disorder
F40.230	Fear of blood
F40.231	Fear of injections and transfusions
F40.232	Fear of other medical care
F40.233	Fear of injury
F40.248	Other situational type phobia
F40.298	Other specified phobia
F40.8	Other phobic anxiety disorders
F40.9	Phobic anxiety disorder, unspecified
F41.0	Panic disorder
F41.1	Generalized anxiety disorder
F41.3	Other mixed anxiety disorders
F41.8	Other specified anxiety disorders
F41.9	Anxiety Disorder, unspecified
F43.0	Acute stress reaction
F43.10	Post-traumatic stress disorder, unspecified

F43.11	Post-traumatic stress disorder, acute
F43.12	Post-traumatic stress disorder, chronic
F43.8	Other reactions to severe stress
F43.9	Reaction to severe stress, unspecified
F69	Unspecified disorder of adult personality and behavior
F70	Mild intellectual disabilities
F71	Moderate intellectual disabilities
F72	Severe intellectual disabilities
F73	Profound Intellectual disabilities
F78	Other intellectual disabilities
F79	Unspecified intellectual disabilities
F82	Specific developmental disorder of motor function
F84.0	Autistic disorder
F84.2	Rett's syndrome
F84.3	Other childhood disintegrative disorder
F84.5	Asperger's syndrome
F84.8	Other pervasive developmental disorders
F84.9	Pervasive developmental disorder, unspecified
F88	Other disorders of psychological development
F89	Unspecified disorder of psychological development
F91.0	Conduct disorder confined to family context
F91.1	Conduct disorder, childhood-onset type
F91.2	Conduct disorder, adolescent-onset type
F91.3	Oppositional defiant disorder
F91.8	Other conduct disorders
F91.9	Conduct disorder, unspecified
J39.2	Other diseases of pharynx
R29.2	Abnormal reflex

Reviews, Revisions, and Approvals	Date
Revised policy.	06/20
Annual Review	12/22
Annual Review and Format Change	12/23
Annual Review	12/24

References

1. American Academy of Pediatric Dentistry. Use of Nitrous Oxide for Pediatric Dental Patients. Reference Manual 2019-2020, pp. 293-298.
2. American Academy of Pediatric Dentistry Behavioral Guidance for the Pediatric Dental Patient. Reference Manual 2019-2020, pp. 266-279
https://www.aapd.org/globalassets/media/policies_guidelines/bp_behavguide.pdf.

3. American Dental Association. Oral Health Topics – Nitrous oxide: dental best practices for nitrous oxide-oxygen. <https://www.ada.org/en/member-center/oral-health-topics/nitrous-oxide>. Accessed April 23, 2020.
4. American Dental Association (ADA) 2024 Current Dental Terminology (CDT).

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of dental practice; peer-reviewed dental/medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national dental and health professional organizations; views of dentists practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. Envolve Dental makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of dental practice current at the time that this clinical policy was approved. “Envolve Dental” means a dental plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Envolve Benefit Options, Inc, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to dental and medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Envolve Dental administrative policies and procedures.

This clinical policy is effective as of the date determined by Envolve Dental. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. Envolve Dental retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute dental or medical advice, dental treatment or dental care. It is not intended to dictate to providers how to practice dentistry. Providers are expected to exercise professional dental and medical judgment in providing the most appropriate care, and are solely responsible for the dental and medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating dentist in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom Envolve Dental has no control or right of control. Providers are not agents or employees of Envolve Dental.

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contracts. Where no such contract exists, providers, members and their representatives agree to be bound by such terms and conditions by providing services to members and/or submitting claims for payment for such services.

Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <https://www.cms.gov> for additional information.

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