

2022 Billing and Coding Guidelines Bispectral Index™ monitoring system

Monitoring with BIS™ technology is generally performed by anesthesia professionals as an intraoperative service. BIS™ technology monitors the state of the brain through acquisition of EEG signals, obtained by a sensor lead placed on the patient's forehead, and may provide insight into the patient-specific effects of anesthesia on the brain.¹⁻⁷

Coding options will vary depending on the service provided, where it is provided and who provided the service. Rates listed in this guide are based on their respective site of care - physician office, ambulatory surgical center, or hospital outpatient department. All rates provided are for the Medicare national unadjusted average for the calendar year rounded to the nearest whole number and do not represent adjustment specific to the provider's location or facility. Commercial rates are based on individual contracts. Providers are encouraged to review contracts to verify their specific contracted allowables. The product addressed within this guide does not have a dedicated HCPCS⁸ Level II code. Payment is included in the associated procedure.

Physician Procedure Coding

Intraoperative

Placement of the BIS™ monitoring sensor and interpretation of BIS™ system values are not separately reportable by anesthesia professionals. National Correct Coding Initiative (NCCI) policy states that "Anesthesia HCPCS/CPT^{®9} codes include all services integral to the anesthesia procedure," including "placement of external devices," such as EEG monitors and "intraoperative interpretation of monitored functions."¹⁰ NCCI edits also bundle codes such as 95955 (EEG during non-intracranial surgery) into the primary anesthesia CPT[®] code.¹¹

Intensive Care Setting

When monitoring with the BIS™ system is performed outside the operating room, physicians may consider using unlisted code 95999. Note that to report the code in the hospital setting, the physician must personally perform the interpretation rather than the hospital nursing staff. Unlisted codes do not have established RVUs under Medicare's RBRVS payment system and are typically priced by the contractor after review and individual consideration.

CPT® Code	Description	Physician ¹²
95999	Unlisted neurological or neuromuscular diagnostic procedure	Carrier Priced

Hospital Inpatient Coding

ICD-10-PCS¹³ procedure codes are used by hospitals to report surgeries and procedures performed in the inpatient setting. While an ICD-10-PCS code exists for intraoperative brain function monitoring, hospitals may elect not to assign codes for adjunctive intraoperative services, such as monitoring with the BIS™ system. If the service is coded, the code is not designated as a significant procedure under DRG logic and does not impact DRG assignment.

ICD-10-PCS Code	Description
Intraoperative	
4A10X4G	Monitoring of central nervous electrical activity, intraoperative, external approach
Intensive care setting	
4A10X4Z	Monitoring of central nervous electrical activity, external approach

Hospital Outpatient Coding

Anesthesia monitoring services are not separately coded by the hospital when provided in the outpatient setting. Under Medicare’s APC payment system, anesthesia services are packaged and are not separately payable. Intraoperative services that are usually or always provided during a surgical procedure are also packaged under APCs and are not separately payable.

Ambulatory Surgery Center Coding

Anesthesia monitoring services are not separately coded by the Ambulatory Surgery Center when provided in that setting. Under Medicare’s ASC payment system, anesthesia services are packaged and are not separately payable. Further, although certain ancillary services are covered when performed integral to surgical procedures in the ASC, nerve monitoring is not among them.

For more information, contact the Medtronic MITG Reimbursement Hotline: 877-278-7482 or via email at: Rs.MedtronicMITGReimbursement@medtronic.com

¹Gan TJ, Glass PS, Windsor A, et al. Bispectral index monitoring allows faster emergence and improved recovery from propofol, alfentanil, and nitrous oxide anesthesia. BIS™ Utility Study Group. *Anesthesiology*. 1997;87(4):808-815.

²Flaishon R, Windsor A, Sigl J, Sebel PS. Recovery of consciousness after thiopental or propofol. Bispectral index and isolated forearm technique. *Anesthesiology*. 1997;86(3):613-619.

³Glass P, Bloom M, Kearse L, Rosow C, Sebel P, Manberg P. Bispectral analysis measures sedation and memory effects of propofol, midazolam, isoflurane, and alfentanil in healthy volunteers. *Anesthesiology*. 1997;86(4):836-847.

⁴Brown D, Avramov M, Tuman K, Ivankovich A. The effect of dexmedetomidine on EEG-Bispectral index. *Anesthesia and Analgesia*. 1999;88(2S):52. Turkmen A, Altan A, Turgut N, Vatansever S, Gokkaya S. The correlation between the Richmond agitation-sedation scale and Bispectral index during dexmedetomidine sedation. *European Journal of Anaesthesiology*. 2006;23:300-304.

⁵Leslie K, Sessler D, Schroeder M, Walters K. Propofol blood concentration and the Bispectral index predict suppression of learning during propofol/epidural anesthesia in volunteers. *Anesth Analg*. 1995;81:1269-1274.

⁶Tripathi M, Kumar V, Kalashetty M, Malviya D, Bais P, Sanjeev O. Comparison of dexmedetomidine and midazolam for sedation in mechanically ventilated patients guided by Bispectral index and sedation-agitation scale. *Anesth Essays Res*. 2017;11(4):828-833.

⁷Alkire MT. Quantitative EEG correlations with brain glucose metabolic rate during anesthesia in volunteers. *Anesthesiology*. 1998;89(2):323-333.

⁸Centers for Medicare & Medicaid Services. Alpha-numeric HCPCS.

<https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update>

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¹⁰NCCI Policy Manual, Chapter II: Anesthesia Services, Section II B-6, 1/1/2021

¹¹<https://www.cms.gov/Medicare/Coding/NationalCorrectCodInitEd/NCCI-Coding-Edits>

¹²Centers for Medicare and Medicaid Services. Medicare Program; CY 2022 Payment Policies Under the Physician Fee Schedule and Other Changes to Part B Payment Policies; Federal Register (86 Fed. Reg. No. 221 64996-66031) <https://www.govinfo.gov/content/pkg/FR-2021-11-19/pdf/2021-23972.pdf> Published November 19, 2021. Physician Fee Schedule – January 2022 Release. <https://www.cms.gov/medicare/physician-fee-schedule/paymentphysicianfeeschedpfs-relative-value-files/rvu22a>

¹³ICD-10-PCS: Department of Health and Human Services, Centers for Medicare & Medicaid Services. International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS). <https://www.cms.gov/medicare/icd-10/2022-icd-10-cm>

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