Overview: Coding and Payment Systems
The procedures described are performed in the hospital setting, usually as an intraoperative service or on an inpatient basis in an intensive or critical care setting.

Hospital Inpatient
Hospitals used International Classification of Diseases (ICD-9-CM) procedure codes through September 30, 2015 to report inpatient services. Beginning October 1, 2015, inpatient hospitals began to use the ICD-10-PCS procedure coding system to report their services. Hospitals bill their services using a UB-04 billing form.

Under the Medicare Severity-Diagnosis Related Group (MS-DRG) methodology for hospital inpatient payment, each inpatient stay is assigned to a specific diagnosis-related group, based on the ICD-10-CM/PCS codes assigned to the diagnoses and certain procedures. Some procedures impact MS-DRG assignment, but others do not. Each MS-DRG has a relative weight that is then converted to a flat payment amount.

Use of specific equipment and supplies cannot be identified on an inpatient hospital bill. This is because the Healthcare Common Procedure Coding System (HCPCS) codes that may be assigned to capture equipment and supplies are not permitted on an inpatient UB-04.

Effective October 1, 2015, ICD-9-CM diagnosis also transitioned to ICD-10-CM diagnosis codes.

Physician
Physicians use Current Procedural Terminology (CPT®) codes* to report all services in all settings, including those performed in the hospital inpatient and outpatient sites of service. Physicians report CPT® codes using a CMS-1500 billing form.

Under Medicare’s Resource-Based Relative Value Scale (RBRVS) methodology for physician payment, each CPT® code is assigned a point value known as the relative value unit (RVU) that is converted to a flat payment amount. Each CPT® code has different RVUs, depending on whether the service was performed in the non-facility setting (such as the physician office) or in the facility setting (such as a hospital). Since Advanced Parameter procedures are performed in a hospital, only the facility RVUs are shown in this guide.

Many CPT® codes can be separated into separate components for payment to facilities (the technical component) and for the physician service (the professional component). For most codes reported in a facility setting, it is understood that the physician is billing only the professional component of the procedure. It may be necessary to append modifier -26 to a CPT® code to identify billing for the professional service. In the facility setting, the physician must personally perform a service to code and bill it. If the service is performed by the hospital nurse, it is incorporated into the hospital bill.

Hospital Outpatient

Hospitals use CPT® codes to report outpatient services. They bill their services using a UB-04 billing form.

Under Medicare’s Ambulatory Payment Classification (APC) methodology for hospital outpatient payment, each CPT® code is assigned to one APC within a group of ambulatory payment classes. Each APC has a relative weight that is converted to a flat payment amount. Multiple APCs can be assigned for each claim, depending on the number of procedures coded. However, some CPT® codes are packaged into other services performed and are not separately payable to the hospital.

Although HCPCS codes are permitted on a hospital outpatient UB-04, use of equipment and supplies specific to advanced parameters cannot be identified simply because no HCPCS codes exist for these items as appropriate for the hospital setting. Equipment and supplies are generally packaged into the APC payment for the outpatient services provided and are not separately payable.

Advanced Monitoring Parameters

**BIS™ Brain Function Monitoring System**

Monitoring with BIS™ technology is generally performed by anesthesia professionals as an intraoperative service. The BIS™ technology measures electrical activity in the brain and monitors the patient’s level of consciousness through the use of processed EEG data obtained by a sensor placed on the patient’s forehead.

Hospital Inpatient Coding

<table>
<thead>
<tr>
<th><strong>ICD-10-PCS:</strong></th>
<th>4A10X4G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring of central nervous electrical activity, intraoperative, external approach</td>
<td></td>
</tr>
</tbody>
</table>

Note that hospitals may elect not to assign codes for adjunctive intraoperative procedures, such as monitoring with the BIS™ system. If the service is coded, the codes are not designated as significant procedures under DRG logic and do not impact DRG assignment.

**U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS).**

Physician 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® codes include all services integral to the anesthesia procedure,” including “placement of external devices,” such as EEG monitors and “intraoperative interpretation of monitored functions.”** NCCI edits also bundle codes such as 95955 (EEG during non-intracranial surgery) into the primary anesthesia CPT® code.

*NCCI Policy Manual, Chapter II: Anesthesia Services, Section II-6. Revision Date: 1/1/2018

**Intensive Care Setting**

Because there are no specific CPT® codes that represent monitoring with the BIS™ system in this setting, physician interpretation of the values should be taken into consideration when selecting the code used for the evaluation and management service.
**Hospital Outpatient Coding**

By convention, 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.**

*Federal Register, November 27, 2007: 66609  
**Federal Register, November 27, 2007: 66627

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**Pulse Oximetry**

Pulse oximetry indirectly measures the oxygen saturation level of arterial blood through the skin by applying a monitor to the patient’s finger, other appendages or forehead. Monitoring may be performed as a single measurement, repeated measurements or as continuous monitoring. Pulse oximetry is used by anesthesia professionals as an intraoperative monitoring activity and may also be used in intensive care settings and on the general care floor.

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**Hospital Inpatient Coding**

<table>
<thead>
<tr>
<th>ICD-10-PCS:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A03XR1</td>
<td>Measurement of arterial saturation, peripheral, external approach</td>
</tr>
<tr>
<td>4A13XR1</td>
<td>Monitoring of arterial saturation, peripheral, external approach</td>
</tr>
</tbody>
</table>

Note that hospitals may elect not to assign codes for adjunctive intraoperative and intensive care services such as pulse oximetry. If the service is coded, the codes are not designated as significant procedures under DRG logic and do not impact DRG assignment.


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**Physician Coding**

**Intraoperative**

Use of the pulse oximetry sensor and interpretation of the values is not separately reportable by anesthesia professionals. NCCI policy states that “Anesthesia HCPCS/CPT** codes include all services integral to the anesthesia procedure,” including “placement of external devices” for oximetry and “intraoperative interpretation of monitored functions,” such as oximetry.*

*NCCI Policy Manual, Chapter II: Anesthesia Services, Section II-6. Revision Date: 1/1/2018
Intensive Care Setting
CPT® codes are available for reporting pulse oximetry performed outside the operating room, however, they are not separately payable to the physician in the facility setting.

<table>
<thead>
<tr>
<th>CPT® Code</th>
<th>Description</th>
<th>Facility RVUs</th>
<th>Medicare National Average Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>94760</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, single determination</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>94761</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, multiple determination (e.g., during exercise)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>94762</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, by continuous overnight monitoring</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Although they have RVUs, all three codes are listed as N/A in the facility setting on the 2015 National Physician Fee Schedule Relative Value File. This means that they are “typically not paid under the PFS when provided in a facility setting.”*


Hospital Outpatient Coding
In addition to the conventions prohibiting coding anesthesia monitoring services and the APC logic that packages anesthesia services, pulse oximetry codes 94760 and 94761 are specifically designated with Status Indicator N, meaning that the codes packaged under APCs. Although hospitals may assign these codes for use of pulse oximetry, the codes are not separately payable under APCs by definition.

Code 94762 has special status. Status Indicator Q3 means that code 94762 is not paid separately when submitted together with a high level ED visit 99284-99285 or critical care encounter 99291. Otherwise, it pays separately in APC 5721 as shown.*

<table>
<thead>
<tr>
<th>CPT® Code</th>
<th>Description</th>
<th>Status Indicator</th>
<th>APC</th>
<th>Relative Weight</th>
<th>Medicare National Average Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>94760</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, single determination</td>
<td>N</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>94761</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, multiple determination (e.g., during exercise)</td>
<td>N</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>94762</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, by continuous overnight monitoring</td>
<td>Q3</td>
<td>5721</td>
<td>1.7335</td>
<td>$136.32</td>
</tr>
</tbody>
</table>
The INVOS™ cerebral/somatic oximetry system monitors the oxygen saturation levels of specific tissues, such as the brain and other tissue. A sensor is applied over the site being monitored and continuous values are displayed on a monitor. This type of oximetry is used by anesthesia professionals as an intraoperative service and is also used in intensive care settings.

**Hospital Inpatient Coding**

ICD-10-PCS** does not provide a specific code for cerebral or somatic oximetry, and also does not provide a default code.

**Physician Coding**

**Intraoperative**

Like pulse oximetry, use of the INVOS™ system and interpretation of the values is not separately reportable by anesthesia professionals. NCCI policy states that “Anesthesia HCPCS/CPT® codes include all services integral to the anesthesia procedure,” including “placement of external devices” for oximetry and “intraoperative interpretation of monitored functions,” such as oximetry.*

*NCCI Policy Manual, Chapter II: Anesthesia Services, Section II-6. Revision Date: 1/1/2018

**Intensive Care Setting**

When cerebral or somatic oximetry is performed outside the operating room, an unlisted CPT® code can be assigned. The code will vary based on the site being monitoring. An example for brain oximetry is below.

Unlisted codes must be assigned because the pulse oximetry codes are specifically defined for pulse oximetry and no other codes unique to cerebral or somatic oximetry are available. Unlisted codes do not have established RVUs and are typically priced by the carrier after review and individual consideration. However, some payers may disallow this code for cerebral or somatic oximetry on the grounds that pulse oximetry is an analogous service and is not separately payable to physicians in the facility setting.

<table>
<thead>
<tr>
<th>CPT® CODE</th>
<th>DESCRIPTION</th>
<th>FACILITY RVUS</th>
<th>MEDICARE NATIONAL AVERAGE PAYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>95999</td>
<td>Unlisted neurological or neuromuscular diagnostic procedure</td>
<td>NA</td>
<td>Carrier Priced</td>
</tr>
</tbody>
</table>

**Hospital Outpatient Coding**

By convention, 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.**

*Federal Register, November 27, 2007:66609
**Federal Register, November 27, 2007:66627
Capnography is a key vital sign for ventilation. It directly measures the level of CO2 in the respiratory cycle and also indirectly measures metabolism and perfusion. Capnography is used by anesthesia professionals as an intraoperative service and is also used in intensive care settings.

Hospital Inpatient Coding

ICD-10-PCS** does not provide a specific code for capnography and also does not provide a default code.

Physician Coding

Intraoperative

Capnography is not separately codable by anesthesia professionals performing deep sedation or general anesthesia. NCCI policy states that “Anesthesia HCPCS/CPT® codes include all services integral to the anesthesia procedure,” including “placement of external devices” for capnography and “intraoperative interpretation of monitored functions,” including capnography.* NCCI edits also rebundle capnography code 94770 into the primary anesthesia CPT® code.

Capnography is also not separately codable for procedures performed under moderate (conscious) sedation. NCCI policy is clear that “many procedures require cardiopulmonary monitoring either by the physician performing the procedure or an anesthesia practitioner. Since these services are integral to the procedure, they are not separately reportable.” Code 94770 is one of the specific examples given.** NCCI edits also package code 94770 into virtually all surgical procedure codes.

Outside the Operating Room

When capnography is performed outside the operating room, for example in the ICU, the physician may assign a separate code when the values are personally interpreted by the physician.

Note that code 94770 may be separately assigned and paid with inpatient hospital care codes 99221-99233 and with critical care codes 99291-99292.

*Note: All Medicare Physician Fee Schedules calculated using CF $35.996 effective January 1 - December 31, 2018. The new CF is reflected in the January PFS update available at: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Federal-Regulation-Notices-Items/CMS-1676-F.html
Hospital Outpatient Coding***
By convention, 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.**

However, capnography may also be performed in the hospital emergency department or clinic to evaluate respiratory status. A separate code may be assigned in these scenarios.

Status Indicator S designates Procedure or Service, Not Discounted When Multiple.

<table>
<thead>
<tr>
<th>CPT* CODE</th>
<th>DESCRIPTION</th>
<th>STATUS INDICATOR</th>
<th>APC</th>
<th>RELATIVE WEIGHT</th>
<th>MEDICARE NATIONAL AVERAGE PAYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>94770</td>
<td>Carbon dioxide, expired gas determination by infrared analyzer</td>
<td>S</td>
<td>5722</td>
<td>3.1643</td>
<td>$248.83</td>
</tr>
</tbody>
</table>

*Federal Register, November 27, 2007:66609
**Federal Register, November 27, 2007:66627