Advanced Monitoring Parameters
2014 Quick Guide to Hospital Coding, Coverage and Payment

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 use International Classification of Diseases (ICD-9-CM) procedure codes to report inpatient 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-9-CM 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, 2014, ICD-9-CM diagnosis and procedure codes will transition to ICD-10-CM (diagnosis codes) and ICD-10-PCS (procedure 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 the 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, 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.

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**Advanced Monitoring Parameters**

**BIS™ Brain Function Monitoring System**

Monitoring with BIS™ technology is generally performed by anesthesia professionals as an intraoperative service. 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.

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**HOSPITAL INPATIENT CODING**

<table>
<thead>
<tr>
<th>ICD-9-CM:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00.94</td>
<td>Intraoperative neurophysiologic monitoring</td>
</tr>
<tr>
<td>89.14</td>
<td>Electroencephalogram</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.

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**PHYSICIAN CODING**

**Intraoperative**

Placement of the BIS™ monitoring sensor and interpretation of BIS values is not separately codable 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 package codes such as 95955 (EEG during non-intracranial surgery) into the primary anesthesia CPT code.

*NCCI Policy Manual, version 19.0, Chapter II: Anesthesia Services, Section B.6

**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.

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**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
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, nose or other appendage. It can 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.

**HOSPITAL INPATIENT CODING**

<table>
<thead>
<tr>
<th>ICD-9-CM:</th>
<th>Measurement of systemic arterial blood gases</th>
</tr>
</thead>
</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.

**PHYSICIAN CODING**

**Intraoperative**

Use of the pulse oximetry sensor and interpretation of the values is not separately codable 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, version 19.0, Chapter II: Anesthesia Services, Section B.6

**Intensive Care Setting**

When pulse oximetry is performed outside the operating room, CPT codes are available. 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>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>94761</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, multiple determination (e.g., during exercise)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>94762</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, by continuous overnight monitoring</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Although they have RVUs, all three codes are listed as N/A in the facility setting on the 2014 National Physician Fee Schedule Relative Value File. This means that they are "typically not paid under the PFS when provided in a facility setting."*  

*Federal Register, December 10, 2013, Addendum A: Explanation and Use of Addendum B

**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 0096 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>N/A</td>
<td>N/A</td>
<td>N/A</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>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>94762</td>
<td>Noninvasive ear or pulse oximetry for oxygen saturation, by continuous overnight monitoring</td>
<td>Q3</td>
<td>00096</td>
<td>1.8035</td>
<td>$131.06</td>
</tr>
</tbody>
</table>
The INVOS cerebral/somatic oximetry system monitors the oxygen saturation levels of specific tissues, such as the brain and other organs. 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-9-CM: | 89.39 | Other nonoperative measurements and examinations |

ICD-9-CM does not have a specific code for cerebral/somatic oximetry, but the general code for other nonoperative measurements can be assigned. Note that hospitals may elect not to assign codes for adjunctive intraoperative and intensive care services, such as cerebral and somatic oximetry. If the service is coded, the code is not designated as significant procedures under DRG logic and does not impact DRG assignment.

**PHYSICIAN CODING**

**Intraoperative**

Like pulse oximetry, use of the INVOS system and interpretation of the values is not separately codable 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, version 19.0, Chapter II: Anesthesia Services, Section B.6

**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.

<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>N/A</td>
<td>carrier-priced</td>
</tr>
</tbody>
</table>

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.

**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 CO\textsubscript{2} in exhaled breath 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**

<table>
<thead>
<tr>
<th>ICD-9-CM:</th>
<th>Other nonoperative measurements and examinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>89.39</td>
<td></td>
</tr>
</tbody>
</table>

ICD-9-CM does not have a specific code for capnography, but the general code for other nonoperative measurements can be assigned. Note that hospitals may elect not to assign codes for adjunctive intraoperative and intensive care services such as capnography. If the service is coded, the code is not designated as significant procedures under DRG logic and does not impact DRG assignment.

**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.

*NCCI Policy Manual, version 19.0, Chapter II: Anesthesia Services, Section B.6

**NCCI Policy Manual, version 19.0, Chapter I: General Correct Coding Policies, Section C.3

**Intensive Care setting**

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.

<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>94770</td>
<td>Carbon dioxide, expired gas determination by infrared analyzer</td>
<td>0.23</td>
<td>$8.24*</td>
</tr>
</tbody>
</table>

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: The CY 2014 physician payment rate was calculated using the CY 2014 Conversion Factor of $35.8228 effective January 1, 2014 to March 31, 2014 as directed by the Congressional passage of the "Pathway for SGR Reform Act of 2013" on December 18, 2013.

**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.

<table>
<thead>
<tr>
<th>CPT Code</th>
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<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>X</td>
<td>0369</td>
<td>3.3536</td>
<td>$243.71</td>
</tr>
</tbody>
</table>

Status Indicator X designates an ancillary service for which separate APC payment is made.

*Federal Register, November 27, 2007:66609

**Federal Register, November 27, 2007:66627