

## New and Revised Neurostimulator Codes

### CPT® Assistant.

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For the Current Procedural Terminology (CPT®) 2024 code set, 11 new or revised Category I codes have been established to address the insertion, revision, replacement, or removal of intracranial, spinal, and peripheral neurostimulators. In addition, six new Category III codes have been established to report percutaneous insertion, revision, replacement, or removal of an integrated neurostimulator for spinal or sacral nerves with the analysis and programming of these devices. This article provides an overview of the intent and use of these new codes.

#### Nervous System

##### Neurostimulators (Intracranial)

**61889** Insertion of skull-mounted cranial neurostimulator pulse generator or receiver, including craniectomy or craniotomy, when performed, with direct or inductive coupling, with connection to depth and/or cortical strip electrode array(s)

(For insertion of cranial neurostimulator pulse generator or receiver other than skull mounted, see 61885, 61886)

**61891** Revision or replacement of skull-mounted cranial neurostimulator pulse generator or receiver with connection to depth and/or cortical strip electrode array(s)

(For replacement of cranial neurostimulator pulse generator or receiver other than skull mounted, see 61885, 61886)

(For revision of cranial neurostimulator pulse generator or receiver other than skull mounted, use 61888)

**61892** Removal of skull-mounted cranial neurostimulator pulse generator or receiver with cranioplasty, when performed

(Do not report 61892 in conjunction with 61891 for the same pulse generator)

(For removal of cranial neurostimulator pulse generator or receiver other than skull mounted, use 61888)

### **Neurostimulators (Spinal)**

Codes 63650, 63661, 63663, 63685, 63688 describe insertion, replacement, revision, or removal of a percutaneous electrode array and neurostimulator requiring pocket creation and connection between electrode array and pulse generator or receiver. For insertion, replacement, revision, or removal of a percutaneous spinal cord or sacral electrode array and integrated neurostimulator, see 0784T, 0785T, 0786T, 0787T.

**63685** Insertion or replacement of spinal neurostimulator pulse generator or receiver, requiring pocket creation and connection between electrode array and pulse generator or receiver

(Do not report 63685 in conjunction with 63688 for the same neurostimulator pulse generator or receiver)

(For insertion or replacement of spinal percutaneous electrode array with integrated neurostimulator, use 0784T)

**63688** Revision or removal of implanted spinal neurostimulator pulse generator or receiver, with detachable connection to electrode array

(For electronic analysis with programming, when performed, of implanted spinal cord neurostimulator, see 95970, 95971, 95972)

(For revision or removal of spinal percutaneous electrode array and integrated neurostimulator, use 0785T)

(For revision or removal of sacral percutaneous electrode array and integrated neurostimulator, use 0787T)

### **Neurostimulators (Peripheral Nerve)**

Codes 64590, 64596 describe two different approaches to placing a neurostimulator pulse generator or receiver. Code 64590 is used in conjunction with 64555, 64561 for permanent placement. Codes 64555, 64561 are used to report electrode array placement for a trial and for the permanent placement of the electrode array. Code 64590 is used to report the insertion of a neurostimulator pulse generator or receiver that requires creation of a pocket and connection between the electrode array and the neurostimulator pulse generator or receiver. Code 64596 is used to report the permanent placement of an integrated system, including the electrode array and receiver.

**64590** Insertion or replacement of peripheral, sacral, or gastric neurostimulator pulse generator or receiver, requiring pocket creation and connection between electrode array and pulse generator or receiver

(Do not report 64590 in conjunction with 64595)

(Do not report 64590 in conjunction with 64596, 64597, 64598)

(For insertion or replacement of percutaneous electrode array with integrated neurostimulator, use 64596)

(For neurostimulators without a named target nerve [eg, field stimulation], use 64999)

**64595** Revision or removal of peripheral, sacral, or gastric neurostimulator pulse generator or receiver, with detachable connection to electrode array

(For revision or removal of percutaneous electrode array with integrated neurostimulator, use 64597)

**64596** Insertion or replacement of percutaneous electrode array, peripheral nerve, with integrated neurostimulator, including imaging guidance, when performed; initial electrode array

**64597** each additional electrode array (List separately in addition to code for primary procedure)

(Use 64597 in conjunction with 64596)

(Do not report 64596, 64597 in conjunction with 64555, 64561, 64590, 64595)

- (For percutaneous implantation of electrode array only, peripheral nerve, use 64555)
- (For implantation of trial or permanent electrode arrays or pulse generators for peripheral subcutaneous field stimulation, use 64999)
- (For neurostimulators without a named target nerve [eg, field stimulation], use 64999)
- (For percutaneous implantation or replacement of integrated neurostimulation system for bladder dysfunction, posterior tibial nerve, use 0587T)
- (For open implantation or replacement of integrated neurostimulator system, posterior tibial nerve, see 0816T, 0817T)

**64598** Revision or removal of neurostimulator electrode array, peripheral nerve, with integrated neurostimulator

- (For revision or removal of electrode array only, use 64585)
- (For revision or removal of integrated neurostimulation system, posterior tibial nerve, see 0588T, 0818T, 0819T)

### Category III Codes

- 0784T** Insertion or replacement of percutaneous electrode array, spinal, with integrated neurostimulator, including imaging guidance, when performed
- 0785T** Revision or removal of neurostimulator electrode array, spinal, with integrated neurostimulator
- 0786T** Insertion or replacement of percutaneous electrode array, sacral, with integrated neurostimulator, including imaging guidance, when performed
- 0787T** Revision or removal of neurostimulator electrode array, sacral, with integrated neurostimulator
- 0788T** Electronic analysis with simple programming of implanted integrated neurostimulation system (eg, electrode array and receiver), including

contact group(s), amplitude, pulse width, frequency (Hz), on/off cycling, burst, dose lockout, patient-selectable parameters, responsive neurostimulation, detection algorithms, closed-loop parameters, and passive parameters, when performed by physician or other qualified health care professional, spinal cord or sacral nerve, 1-3 parameters

(Do not report 0788T in conjunction with 43647, 43648, 43881, 43882, 61850-61888, 63650, 63655, 63661, 63662, 63663, 63664, 63685, 63688, 64553-64595, 64596, 64598, 95970, 95971, 95972, 95976, 95977, 95983, 95984, 0587T, 0588T, 0589T, 0590T, 0784T, 0785T, 0786T, 0787T, 0789T)

**0789T** Electronic analysis with complex programming of implanted integrated neurostimulation system (eg, electrode array and receiver), including contact group(s), amplitude, pulse width, frequency (Hz), on/off cycling, burst, dose lockout, patient-selectable parameters, responsive neurostimulation, detection algorithms, closed-loop parameters, and passive parameters, when performed by physician or other qualified health care professional, spinal cord or sacral nerve, 4 or more parameters

(Do not report 0789T in conjunction with 43647, 43648, 43881, 43882, 61850-61888, 63650, 63655, 63661, 63662, 63663, 63664, 63685, 63688, 64553-64595, 64596, 64598, 95970, 95971, 95972, 95976, 95977, 95983, 95984, 0587T, 0588T, 0589T, 0590T, 0784T, 0785T, 0786T, 0787T, 0788T)

## Intracranial Neurostimulators

The CPT codes listed in Table 1, which will be included in the CPT 2024 code set, should be used for reporting procedures associated with skull-mounted intracranial neurostimulators beginning on January 1, 2024.

**Table 1. New Codes for Skull-Mounted Intracranial Neurostimulators**

Code	Descriptor
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<input checked="" type="checkbox"/> <b>61889</b>	Insertion of skull-mounted cranial neurostimulator pulse generator or receiver, including craniectomy or craniotomy, when performed, with direct or inductive coupling, with connection to depth and/or cortical strip electrode array(s)
<input checked="" type="checkbox"/> <b>61891</b>	Revision or replacement of skull-mounted cranial neurostimulator pulse generator or receiver with connection to depth and/or cortical strip electrode array(s)
<input checked="" type="checkbox"/> <b>61892</b>	Removal of skull-mounted cranial neurostimulator pulse generator or receiver with cranioplasty, when performed

Codes 61889, 61891, and 61892 represent insertion, revision or replacement, and removal of skull-mounted neurostimulators respectively. Skull-mounted neurostimulators are used for deep brain stimulation, which can be used to treat a variety of conditions, such as Parkinson disease and other movement disorders, dystonia, essential tremor, epilepsy, and obsessive-compulsive disorder. Before 2024, the only codes available to report brain neurostimulators were codes in which the pulse generator was implanted in the chest or abdomen and not skull-mounted neurostimulation devices.

### Spinal Neurostimulators

Codes 63685 and 63688 have been revised for the CPT 2024 code set. The revised descriptors are listed in Table 2.

**Table 2. Revised Codes for Spinal Neurostimulators**

Code	Descriptor
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<input checked="" type="checkbox"/> <b>63685</b>	Insertion or replacement of spinal neurostimulator pulse generator or receiver, requiring pocket creation and connection between electrode array and pulse generator or receiver
<input checked="" type="checkbox"/> <b>63688</b>	Revision or removal of implanted spinal neurostimulator pulse generator or receiver, with detachable connection to electrode array

Spinal neurostimulators are used to treat chronic pain for a wide variety of conditions. The revisions to codes 63685 and 63688 have been made to better represent the work involved in inserting, replacing, revising, or removing spinal neurostimulators, given advances in neurostimulator technology. The guidelines for these codes have also been revised to reflect these changes. Revisions and additions to the parenthetical notes have been made to guide proper reporting as well.

### Peripheral Neurostimulators

Three new peripheral neurostimulator codes (64596-64598) have been added to the CPT 2024 code set. In addition, revisions have been made to two peripheral nerve neurostimulator codes (64590, 64595). The new and revised codes with their descriptors are listed in Table 3.

**Table 3. New and Revised Codes for Peripheral Neurostimulators**

<b>Code</b>	<b>Descriptor</b>
<input checked="" type="checkbox"/> <b>64590</b>	Insertion or replacement of peripheral, sacral, or gastric neurostimulator pulse generator or receiver, requiring pocket creation and connection between electrode array and pulse generator or receiver

<input checked="" type="checkbox"/> <b>64595</b>	Revision or removal of peripheral, sacral, or gastric neurostimulator pulse generator or receiver, with detachable connection to electrode array
<input checked="" type="checkbox"/> <b>64596</b>	Insertion or replacement of percutaneous electrode array, peripheral nerve, with integrated neurostimulator, including imaging guidance, when performed; initial electrode array
<input checked="" type="checkbox"/> <b>64597</b>	each additional electrode array (List separately in addition to code for primary procedure)
<input checked="" type="checkbox"/> <b>64598</b>	Revision or removal of neurostimulator electrode array, peripheral nerve, with integrated neurostimulator

As with spinal neurostimulators, peripheral neurostimulators are used to help control pain for a variety of conditions. Gastric neurostimulators stimulate the smooth muscle of the stomach and are used to control symptoms, such as chronic nausea and vomiting, that patients who are diagnosed with gastroparesis may experience. Sacral neurostimulators are used to treat symptoms associated with an overactive bladder, such as urinary urgency, urinary frequency, and incontinence. Codes 64590 and 64595 have been revised to include sacral neurostimulator insertion, replacement, revision, or removal because the work involved is the same as that of insertion, replacement, revision, or removal of a peripheral or a gastric neurostimulator. In addition, both codes have been revised to be more specific regarding pocket creation for the pulse generator or receiver and the connection of the electrode array.

New codes 64596-64598 have been added to address the insertion, replacement, revision, or removal of a peripheral nerve-integrated neurostimulator with a percutaneous electrode array. An integrated neurostimulator contains the pulse generator or receiver and the electrode array as an all-in-one unit. A small incision is made, and the electrode array is tunneled percutaneously to the appropriate site. The same incision site is then used to create the pocket for the pulse generator or receiver. If more than one electrode array is used, add-on code 64597 may be reported for each additional electrode array.

Guidelines for all these codes have been updated accordingly, and parentheticals have been added to assist in proper reporting. To distinguish between neurostimulator units that have more than one component (two or more component implant) and require connection vs neurostimulator units that are

integrated (single-component implant), the following definition has been added to the guidelines to provide clarity:

A neurostimulator system includes an implanted pulse generator or implanted receiver with an external transmitter, a collection of contacts, electrodes (electrode array), an extension if applicable, an external controller, and external charger, if applicable. The electrode array provides the actual electrical stimulation. The pulse generator or receiver may be integrated with the electrode array (single-component implant) or have a detachable connection to the electrode array (two or more component implant).

### **New Category III Neurostimulator Codes**

Six new Category III neurostimulator codes (0784T-0789T) have been added to the CPT 2024 code set. These new codes and their descriptors are listed in Table 4.

**Table 4. New Category III Neurostimulator Codes**

<b>Code</b>	<b>Descriptor</b>
<input checked="" type="checkbox"/> <b>0784T</b>	Insertion or replacement of percutaneous electrode array, spinal, with integrated neurostimulator, including imaging guidance, when performed
<input checked="" type="checkbox"/> <b>0785T</b>	Revision or removal of neurostimulator electrode array, spinal, with integrated neurostimulator
<input checked="" type="checkbox"/> <b>0786T</b>	Insertion or replacement of percutaneous electrode array, sacral, with integrated neurostimulator, including imaging guidance, when performed
<input checked="" type="checkbox"/> <b>0787T</b>	Revision or removal of neurostimulator electrode array, sacral, with integrated neurostimulator

Code	Descriptor
<input checked="" type="checkbox"/> <b>0788T</b>	Electronic analysis with simple programming of implanted integrated neurostimulation system (eg, electrode array and receiver), including contact group(s), amplitude, pulse width, frequency (Hz), on/off cycling, burst, dose lockout, patient-selectable parameters, responsive neurostimulation, detection algorithms, closed-loop parameters, and passive parameters, when performed by physician or other qualified health care professional, spinal cord or sacral nerve, 1-3 parameters
<input checked="" type="checkbox"/> <b>0789T</b>	Electronic analysis with complex programming of implanted integrated neurostimulation system (eg, electrode array and receiver), including contact group(s), amplitude, pulse width, frequency (Hz), on/off cycling, burst, dose lockout, patient-selectable parameters, responsive neurostimulation, detection algorithms, closed-loop parameters, and passive parameters, when performed by physician or other qualified health care professional, spinal cord or sacral nerve, 4 or more parameters

Similar to codes 64596 and 64598, codes 0784T-0787T should be used to report insertion, replacement, revision, or removal of an electrode array with an integrated neurostimulator system for spinal nerves (0784T-0785T) and sacral nerves (0786T-0787T), respectively. Analysis and simple programming (1-3 parameters) of the neurostimulator should be reported with code 0788T, while analysis and complex programming (4 or more parameters) with code 0789T.

The following clinical examples and procedural descriptions reflect typical clinical scenarios for which these new and revised codes would be appropriately reported.

**Clinical Example (61889)**

A 35-year-old male has a 15-year history of poorly controlled seizures despite having tried numerous medications. Following a surgical work-up, the epileptic focus was identified in eloquent cortex, not amenable to surgical resection or laser ablation.

### **Description of Procedure (61889)**

After making the skin incision and elevating the scalp flap, mobilize the scalp in multiple directions to allow for an appropriate tension-free closure. Use the craniectomy template to locate and mark the appropriate site for the craniectomy, taking into account the skull morphology and curvature as well as any prior bone flaps and cranial hardware (which may need to be removed/revised to accommodate the craniectomy). Create one or more burr holes using a high-speed drill, which is then used to create and appropriately size the full thickness craniectomy piece (down to the dura), which is then removed. During this process, take care to avoid violating the dura, which may be scarred to the bone from prior procedures. Obtain epidural hemostasis. Contour the craniectomy opening with the high-speed drill so that the pulse generator tray fits in securely, evenly, and completely. Individually contour the mounting arms on the tray to the determined depth for the generator tray, ensuring that they are not overly proud and that the tray is seated evenly and deeply in the craniectomy space. Secure the tray to hold the pulse generator to the skull with multiple screws. Make a separate incision as necessary to expose the prior placed cortical or deep brain stimulating electrodes. Then bring these neurostimulator electrodes to the pulse generator and connect in the required fashion. Place the pulse generator in the previously implanted tray and secure in place with a screw, ensuring that the overall contour of the implant with respect to the skull is even and not overly proud. Arrange/coil the electrodes under the scalp flap to provide slack, minimize their risk of injury during any subsequent revision, and minimize the possibility of eroding through the scalp in delayed fashion. Drape the programming wand and bring into the field. Interrogate the generator and check the electrode connections. Spend time recording the EEG to ensure that the previously placed electrodes are recording appropriate information. Then program the device for recording and, if necessary, stimulation. Irrigate the field and evaluate the scalp flap to ensure that the closure will be tension-free, mobilizing it further as necessary. Then close all incisions while avoiding damage to the subgaleal implants.

### **Clinical Example (61891)**

A 40-year-old male presents with a 20-year history of seizures. Patient previously underwent implantation of a neurostimulator system with a skull-mounted cranial neurostimulator pulse generator for reduction in seizure frequency that requires revision and replacement of the pulse generator due to impending end of battery life.

### **Description of Procedure (61891)**

Carefully open the skin incision to avoid damage to the subgaleal electrodes. Then gently mobilize the scalp flap and locate the skull-mounted generator.

This is often performed without the assistance of monopolar cautery because this can cause generator malfunction. Carefully dissect the brain stimulation electrodes out of their scar and follow to the pulse generator, taking care not to damage the electrodes. Carefully mobilize the scalp flap off the pulse generator to allow for removal of the generator from its holding tray and for a tension-free closure while protecting the subgaleal electrodes from damage. Loosen the tray screw. Remove the generator from the tray. Then disconnect the cortical and/or deep brain neurostimulator electrodes from the old pulse generator and connect to the new pulse generator in the required fashion. Place the pulse generator in the tray and secure in place with the tray screw. Drape the programming wand and bring it into the field. Interrogate the generator and check the electrode connections. Spend time recording the EEG to ensure that the previously placed electrodes are recording appropriate information. Then program the device for recording and, if necessary, stimulation. Irrigate the field and evaluate the scalp flap to ensure that the closure will be tension-free, mobilizing it further as necessary. Then close all incisions while avoiding damage to the subgaleal implants.

**Clinical Example (61892)**

A 40-year-old male with a 20-year history of seizures previously underwent implantation of a neurostimulation system requiring a skull-mounted programmable pulse generator. He now desires removal of the generator with cranioplasty of the resulting skull defect.

**Description of Procedure (61892)**

Carefully open the skin incision to avoid damage to the subgaleal electrodes. Then gently mobilize the scalp flap and locate the skull-mounted generator. Carefully dissect the brain stimulation electrodes out of their scar and follow to the pulse generator. Loosen the tray screw. Remove the generator from the tray. Loosen and remove the screws mounting the tray to the skull along with the tray itself. Obtain epidural hemostasis and perform an allograft cranioplasty by appropriately shaping and sizing a piece of cranioplasty material and securing it to the skull over the craniectomy defect with screws. Irrigate the field and evaluate the scalp flap to ensure that the closure will be tension-free, mobilizing it further as necessary. Close all incisions while avoiding damage to the subgaleal implants.

**Clinical Example (63685)**

A 49-year-old male with intractable back and leg pain, whose conservative treatment has been unsuccessful, has undergone a successful trial of a spinal neurostimulator electrode array. He is referred for placement of a spinal neurostimulator pulse generator and connection to the previously placed electrode array.

**Description of Procedure (63685)**

After induction of anesthesia, incise the skin and obtain hemostasis. Carry out dissection and develop a subcutaneous pocket for placement of the stimulator generator or, if the procedure is for replacement of a generator, dissect the old generator out of the pocket, taking care to avoid damage to the electrode arrays. Tunnel the electrode arrays to the pocket and out onto the skin or disconnect them from the pulse generator if performing a replacement. Unpack the sterile neurostimulator pulse generator, soak the generator in antibiotic solution, and then attach the generator to the lead terminals in standard fashion. Then place the generator into the fashioned subcutaneous pocket. Test each of the leads separately for impedances to verify secure connection and proper function. Track the connection and program the device to begin stimulation. Obtain hemostasis and then copiously irrigate the pocket with antibiotic solution prior to layered closure.

**Clinical Example (63688)**

A 50-year-old male with an implanted spinal cord stimulator requests removal of his neurostimulator pulse generator because of its waning benefit. The subcutaneous neurostimulator pulse generator is disconnected and removed from the electrode array.

**Description of Procedure (63688)**

Re-open the old skin incision and check the wound for hemostasis. Dissect the old generator out of its subcutaneous pocket and place on a sterile towel. Carefully disconnect the lead terminals from the expired generator. Irrigate the subcutaneous pocket with antibiotic solution and check for hemostasis. Then irrigate the wound a final time and close in three layers. Apply sterile dressing.

**Clinical Example (64590)**

A 65-year-old with overactive bladder refractory to previous therapy is referred for insertion of neurostimulator pulse generator.

**Description of Procedure (64590)**

Identify bony landmarks and prior extension set connection to permanent lead. Confirm connection site is in an appropriate location for placement of an implantable pulse generator (IPG). Inject marked incision site with local anesthetic. Gently incise prior incision site to avoid damage to the permanent lead and carefully remove all sutures. Continue with sharp dissection for full visualization of permanent lead and connection to extension set. Remove stay

suture. Enlarge incision site of the exteriorized portion of the extension set with hemostat. Unscrew extension set from permanent lead without tension on permanent lead. Gently remove liberated extension set from the connection site with gentle traction through the tunneled exit away from the connection site. Perform copious irrigation of the connection site. Ensure there is no evidence of infection. Create pocket commensurate with IPG size and confirm marked hemostasis. Introduce IPG into operative field. Secure permanent lead to IPG with screwdriver after fully seated. Manage permanent lead placement into pocket and gently place IPG in pocket. Introduce the programmer into operative field. Perform impedance evaluation of IPG in sterile fashion after positioned in pocket. Remove programmer from operative field. Close incision in two layers after securing IPG in pocket. Close prior extension set exit site in two layers. Place surgical glue on operative incision skin edges.

**Clinical Example (64595)**

A 65-year-old with overactive bladder refractory to previous therapy is referred for revision/removal of neurostimulator pulse generator.

**Description of Procedure (64595)**

Identify prior implantable pulse generator (IPG). Inject prior operative incision with local anesthetic and carefully incise prior incision site. Dissect open the prior pocket and gently exteriorize the IPG. Unscrew array set screw and remove the IPG from the array. Determine etiology of existing pocket problem. Remove debris/infectious material from pocket and copiously irrigate. Attach hemostat to array and gently retract the array to determine tunnel site to midline. Incise midline tunnel site through dermis being careful to not injure array. Use hemostat through midline incision site to elevate array through dermis. Use asepto syringe to irrigate tunnel site exit and entrance from pocket. Close the initial pocket site with multiple-layer closure and confirm hemostasis. Apply surgical glue to skin edges.

**Clinical Example (64596)**

A 75-year-old male with intractable knee pain after total knee replacement who has not passed conservative treatment for management of the pain underwent a successful trial of a percutaneously placed peripheral neurostimulator electrode array. He is now referred for exchange of the percutaneous electrode array with a subcutaneous neurostimulator that includes an electrode array placed through the same access site.

**Description of Procedure (64596)**

N/A

**Clinical Example (64597)**

A 46-year-old male presents with chronic shoulder pain. He underwent a successful trial of percutaneously placed peripheral neurostimulator electrode arrays and is now referred for placement of two separate subcutaneous neurostimulators with integrated electrode arrays. **[Note:** This is an add-on code. Only consider the additional work related to the placement of the second integrated neurostimulator that includes an electrode array.]

**Description of Procedure (64597)**

N/A

**Clinical Example (64598)**

A 46-year-old male with chronic neuropathic pain who has benefited from a peripheral nerve implanted, integrated neurostimulation system needs to have the integrated system revised due to migration.

**Description of Procedure (64598)**

N/A

**Clinical Example (0784T)**

A 60-year-old male with intractable back and leg pain after lumbar fusion had unsuccessful conservative treatment for pain management. He underwent a successful trial of a percutaneously placed spinal cord stimulator electrode array. He is referred for placement of a neurostimulator that includes an electrode array, which is placed through the same access site.

**Description of Procedure (0784T)**

Make a skin incision and use electrocautery to obtain hemostasis. Make a subcutaneous pocket to facilitate the implantation of the neurostimulator. Through the same access site, place the electrode array percutaneously in the epidural space utilizing fluoroscopy. Test the electrode array for impedance and paresthesia. When the position is confirmed, place the remainder of the total neurostimulator into the subcutaneous pocket and anchor in place. Check the wound for hemostasis and then irrigate copiously. Close the wound in layers and apply a sterile dressing. Transport the patient to the recovery room.

**Clinical Example (0785T)**

A 57-year-old male who has benefited from a spinal neurostimulator needs to have the stimulator revised due to migration.

**Description of Procedure (0785T)**

Make an incision to reopen the old pocket for the neurostimulator and achieve hemostasis. Re-suture the neurostimulator in the pocket to prevent migration. Check the wound again for hemostasis and then irrigate copiously. Close the wound in layers and apply a sterile dressing. Transport the patient to the recovery room.

**Clinical Example (0786T)**

A 57-year-old male with debilitating urge incontinence voids hourly. Conservative remedies have been unsuccessful. A percutaneous test stimulation of the sacral nerve is successful and placement of a permanent neurostimulator with an integrated electrode array is planned.

**Description of Procedure (0786T)**

Approximate levels of the sacral foramina using fluoroscopy. Anesthetize skin and periosteum and pass an electrically insulated 3- or 5-inch needle percutaneously into the foramen. Connect an external screener (power source) to the foramen needle by a separate cable and grounding source. Discern and document specific biologic responses to stimulation of the sacral spinal nerve 2 (S2) and no activity for S4 (desired responses are S2 and S3). Exchange a 3-0 temporary electrode through the lumen of the foramen needle leaving only the integrated neurostimulator and electrode in place. Perform retesting to confirm response. Place dressing to secure the electrode in place. Perform a hard X ray to confirm the lead position.

**Clinical Example (0787T)**

A 47-year-old male, who has benefited from a sacral nerve neurostimulator, needs to have the electrode array with integrated neurostimulator revised due to migration of the lead.

**Description of Procedure (0787T)**

Make incisions near the sacral foramen to access the electrode array with integrated neurostimulator. Proceed with dissection to the sensor lead placed

through the sacral foramen. Once identified, remove the lead and integrated neurostimulator from its subcutaneous tunnel. Carefully dissect the stimulator array free of the sacral nerve. Irrigate the wounds. Close the surgical incisions in a layered fashion and apply dressings.

**Clinical Example (0788T)**

A 61-year-old male with a condition that requires nerve stimulation returns for simple programming of the implanted integrated neurostimulation system in which three or fewer of the parameters are adjusted.

**Description of Procedure (0788T)**

Link the programmer with the patient's programmer (handheld device) and interrogate the patient's neurostimulator device. Review preset program settings by switching the handheld programmer between programs and recording patient sensation. Change the lead configuration and adjust and maintain the amplitude when stimulation is felt, as appropriate. If inappropriate, repeat the process until the appropriate response is obtained. Three parameters are assessed and changed as necessary. The new program is resynchronized with the patient's handheld programmer.

**Clinical Example (0789T)**

A 58-year-old male with a condition that requires nerve stimulation returns for complex programming of the implanted integrated neurostimulation system in which four or more parameters are adjusted.

**Description of Procedure (0789T)**

Link the programmer with the patient's programmer (ie, handheld device) and interrogate the patient's neurostimulator device. Review the preset program settings by switching the patient's handheld programmer between programs and recording the patient's sensation. Change the lead configuration and, as appropriate, change the amplitude until stimulation is felt. The resulting configuration is maintained. If inappropriate, repeat the process until the appropriate response is obtained. Four or more parameters are assessed and changed as necessary. The new program is resynchronized with the patient's handheld programmer.