

Hospital Coding for Impella® Heart Pump Procedures

ICD-10-PCS CODING GUIDANCE

January 2024



According to ICD-10 PCS Official Guideline B6.1a, a device is coded only if a device remains after the procedure is completed. If no device remains, the device value No Device is coded. In limited root operations, the classification provides the qualifier values Temporary and Intraoperative, for specific procedures involving clinically significant devices, where the purpose of the device is to be utilized for a brief duration during the procedure or current inpatient stay.

The ICD-10 PCS device removal code may be used when the hospital that receives the patient only monitors care and removes the Impella device prior to patient discharge. If escalation of care therapy occurs, use the appropriate ICD-10 PCS code that corresponds to the therapy or services that are provided.

*Report conduit code separately when documentation supports procedure. When coding for conduit codes (X2HL0F9, X2HM0F9 or X2HX0F9) an insertion code must be reported as well.

** For repositioning, report 02WAXRZ (The repositioning of the Impella device is consistent with the root operation "Revision," which includes correcting the displaced device. AHA Coding Clinic, Volume 5, Number 1, First Quarter 2018).

1. AHA Coding Clinic, Volume 4, Number 4, Fourth Quarter 2017
2. AHA Coding Clinic, Volume 4, Number 1, First Quarter 2017
3. AHA Coding Clinic, Volume 3, Number 4, Fourth Quarter 2016

4. ICD-10 MS-DRG Definitions Manual Files v41 (Updated August 2023)
5. FY 2024 IPPS/LTCH PPS final rule CMS -1785-F

Please note applicable guidelines and instructions of ICD-10-PCS codes are subject to change at any time.

CPT	Description	Total RVUs ¹	Work RVUs ¹	Medicare National Avg. ²
Percutaneous Insertion of Impella Devices (including axillary cutdowns)				
Insertion				
33990	Insertion of ventricular assist device, percutaneous, including radiological supervision and interpretation; left heart , arterial access only	10.55	6.75	\$345
33995	Insertion of ventricular assist device, percutaneous, including radiological supervision and interpretation; right heart , venous access only	10.38	6.75	\$340
Axillary Cutdown				
+34716	Open axillary/subclavian artery exposure with creation of conduit for delivery of endovascular prosthesis or for establishment of cardiopulmonary bypass, by infraclavicular or supraclavicular incision, unilateral	10.87	7.19	\$356
37799*	Unlisted procedure, vascular surgery	N/A	N/A	N/A
Percutaneous Removal				
33992	Removal of percutaneous left heart ventricular assist device, arterial or arterial and venous cannula(s), at separate and distinct session from insertion	5.50	3.55	\$180
33997	Removal of percutaneous right heart ventricular assist device, venous cannula, at separate and distinct session from insertion	4.72	3.00	\$155
Open Insertions of Impella Devices (via Median Sternotomy or Thoracotomy)³				
Open Surgical Insertion				
33975	Insertion of ventricular assist device; extracorporeal, single ventricle	38.16	25.00	\$1,249
Open Surgical Removal				
33977	Removal of ventricular assist device; extracorporeal, single ventricle	32.92	20.86	\$1,078
Patient Management Procedure Codes				
Repositioning				
33993**	Repositioning of percutaneous ventricular assist device with imaging guidance at separate and distinct session from insertion	4.86	3.10	\$159
Critical Care Monitoring				
99291	Critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes	6.31	4.50	\$207
+99292	Critical care, evaluation and management of the critically ill or critically injured patient; each additional 30 minutes (List separately in addition to code for primary service)	3.18	2.25	\$104
Device Management				
93750	Interrogation of ventricular assist device (VAD), in person, with physician or other qualified health care professional analysis of device parameters (e.g., drivelines, alarms, power surges), review of device function (e.g., flow and volume status, septum status, recovery), with programming, if performed, and report	1.18	0.75	\$39
Removal and Repositioning				
CPT code 33992 (removal) and CPT code 33993 (repositioning) may be billed and paid for in addition to CPT code 33990 (insertion) if performed during a separate session. Medicare's definition of a separate session is that the services be performed during a different patient encounter. Payers may require the use of a modifier to report multiple procedures by the same physician on the same day.				
Radiology and Imaging				
CPT Codes 33990 and 33993 include radiology or imaging guidance in their description. This indicates to some payers that the imaging and radiology procedures are included in the primary procedure and are not eligible for separate payment.				
Other Procedural Activities				
When using an unlisted procedure code, it is important to submit a copy of the procedure to explain the services performed. It is strongly recommended that the freeform field of the claim form (Field 19,"Reserved For Local Use,") be used to document a crosswalk to another procedure believed to be fairly equivalent. You should also indicate in Field 19 an expected payment amount for the payer's reference. It is important to check with each payer regarding their specific coding policy for axillary insertion and repair and, if covered, obtain instruction as to how to report the service (i.e., code 33999 or another CPT code).				

1. CMS 2024 Physician Fee Schedule, released December 2023

2. Payment calculated using 2024 conversion factor of \$32.74

3. AHA Coding Clinic, Q4, V3, N4, 2016

*When insertion and cutdown performed by different physicians, it is recommended to report 37799 with a crosswalk to the appropriate CPT code – 34714, 34715, 34716, 34812

**When repositioning with SmartAssist® without using imaging guidance, it is recommended that unlisted cardiac surgery procedure code 33999 is used.

Multiple Procedure Payment Reduction (MPPR) on the Professional Component may apply.

+ CPT* code designated by the + symbol is listed in addition to the primary code to provide additional information about the procedure. RVU, Relative Value Units.

RVUs are measures of the physician's work, time and intensity of the procedure and are used to calculate payments for physicians

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