Device or No Device? Coding Impella/IABP External Ventricular Support and the Impact on MS-DRG Assignment

By Megan DeVoe, CCS

The Impella® device (2.5 and 5.0) provides percutaneous external ventricular support for high-risk patients who cannot undergo traditional open cardiovascular procedures in the inpatient hospital setting. Like intra-aortic balloon pumps (IABPs) that have been used for decades, these devices may significantly impact MS-DRG assignment with thousands of hospital reimbursement dollars at stake. With the advent of ICD-10-PCS and new coding rules, coding professionals may need to assign one or two ICD-10-PCS codes to fully capture the services related to these devices.

Percutaneous external ventricular devices help to improve hemodynamic stability in patients with severe systemic conditions. These devices may be used as a temporary lifesaving measure for patients awaiting heart transplants. The devices are also used to support patients with acute myocardial infarctions (AMI), cardiogenic shock, congestive heart failure (CHF), and other heart conditions who are undergoing high-risk percutaneous coronary interventions (PCI).

When is it appropriate to code the device insertion as well as the ventricular assistance? Per the ICD-10-PCS Official Coding Guidelines (ICD-10-PCS Official Guidelines for Coding and Reporting FY 2017, B6.1a) a device is coded only if a device remains after the procedure is completed. While this seems straightforward, when trying to apply this guideline things can get sticky. What exactly is the definition of the completion of the procedure? Is it when the incisions are closed? When the patient leaves the operating room? When all devices are removed?

The first quarter 2017 issue of the American Hospital Association's *Coding Clinic for ICD-10-CM and ICD-10-PCS* quotes the National Quality Forum (NQF) when it comes to this definition. According to the NQF:

> Surgery ends after all incisions or procedural access routes have been closed in their entirety, device(s) such as probes or instruments have been removed, and, if relevant, final surgical counts confirming accuracy of counts and resolving any discrepancies have concluded and the patient has been taken from the operating/procedure room.

This quote provides hospitals with an official source to use when defending against audits and denials. Based on this information, coding professionals can confidently assign codes for both the external ventricular assistance and the Impella/IABP device insertion when the patient leaves the operating room (OR) with the device in place. These devices may be in place for days or just a few hours postoperatively.

For example, the Impella 2.5 intravascular catheter is a microaxial pump that pulls blood from the left heart ventricle and expels the blood from the device into the ascending aorta, supporting the patient's circulatory system by improving blood flow. Let's examine the MS-DRG impact the Impella device has on one of these high-risk acute myocardial infarction patients.

An 88-year-old male presents to a hospital in February 2017 with a ST elevation myocardial infarction (STEMI) involving the right coronary artery, known native coronary artery disease, and acute on chronic diastolic congestive heart failure (CHF). The patient is taken to the cardiac catheterization laboratory. A diagnostic left heart catheterization with the placement of four drug-eluting stents is performed utilizing Impella support.

Please note that the codes listed in the scenarios below are only a sampling of codes, as the case is strictly for the demonstration of the Impella coding and do not represent the full list of codes for this patient.

Case Scenario #1

Due to the acute on chronic CHF, the patient described above requires the Impella device to be left in place postoperatively.

Principal diagnosis:

- **I21.11**, ST elevation (STEMI) myocardial infarction involving right coronary artery

Secondary diagnoses:

- **I50.33**, Acute on chronic diastolic (congestive) heart failure
- **I25.10**, Atherosclerotic heart disease of native coronary artery without angina pectoris

Principal procedure:

- **027337Z**, Dilation of 4+ Coronary Arteries with 4 Drug-eluting stents, Percutaneous Approach

Secondary procedures:

- **02HA3RZ**, Insertion of External Heart Assist System into Heart, Percutaneous Approach
- **5A0221D**, Assistance with Cardiac Output using Impeller Pump, Continuous
- **4A023N7**, Measurement of Cardiac Sampling and Pressure, Left Heart, Percutaneous Approach

MS-DRG assigned:

- **215**, Other Heart Assist System Implant; MDC 5, weight 16.1076

Case Scenario #2

These codes are for the same patient as in case scenario #1, except in this case the patient does not require postoperative Impella support.

Principal diagnosis:

- **I21.11**, ST elevation (STEMI) myocardial infarction involving right coronary artery

Secondary diagnoses:

- **I50.33**, Acute on chronic diastolic (congestive) heart failure
- **I25.10**, Atherosclerotic heart disease of native coronary artery without angina pectoris

Principal procedure:

- **027337Z**, Dilation of 4+ Coronary Arteries with 4 or more Drug-eluting Intraluminal stents, Percutaneous Approach

Secondary procedures:

- **5A0221D**, Assistance with Cardiac Output using Impeller Pump, Continuous
- **4A023N7**, Measurement of Cardiac Sampling and Pressure, Left Heart, Percutaneous Approach

MS-DRG assigned:

- **216**, Cardiac valve and other major cardiothoracic procedures with cardiac catheterization with MCC; MDC 5, weight 9.644

The examples above demonstrate the enormous impact that the Impella device insertion had on reimbursement for the hospital. It is important for coding professionals to recognize and understand all procedures performed so that the correct ICD-10-PCS code(s) are assigned—as well as understand the impact each code may have on the MS-DRG assignment. The Centers for Medicare and Medicaid Services website publishes the MS-DRG definitions manual on its website annually. Reviewing this resource to learn how codes impact the MS-DRG can be very helpful. This resource is also helpful in cases where the MS-DRG doesn't seem to completely tell the story of the admission using the ICD-10 coding system.

Health information management professionals learn and grow with each case. It is important to continue that growth, ask frequent questions, and research how procedures are carried out as well as the devices that are used. Vendors provide educational materials for the devices they manufacture, and their websites may even have video demonstrations of procedures involving their products.

For each inpatient admission, the ICD-10-CM and ICD-10-PCS codes should clearly represent resources used as well as the role hospitals and practitioners have in that patient's care. Coding is an art and a science. As the keepers of the nation's health statistics, coding professionals need to feel free to think outside of the box and use every resource at their fingertips.

References

Abiomed, Inc. "Impella Ventricular Support Systems for Use During Cardiogenic Shock and High-Risk PCI Instructions for Use and Clinical Reference Manual." 2016.

American Hospital Association. *Coding Clinic for ICD-10 CM/PCS* (First Quarter 2017). Chicago, IL: American Hospital Association, pp. 10-13.

Centers for Medicare and Medicaid Services. "ICD-10-CM/PCS MS-DRG v34.0 Definitions Manual."

Centers for Medicare and Medicaid Services. "Medical and Surgical Section Guidelines (section 0); B6 Device." ICD-10-PCS Official Guidelines for Coding and Reporting. 2016.

Megan DeVoe (mdevoe@earthlink.net) is senior product specialist at TruCode.

Article citation:
DeVoe, Megan. "Device or No Device? Coding Impella/IABP External Ventricular Support and the Impact on MS-DRG Assignment" *Journal of AHIMA* 88, no.6 (June 2017): 52-53.