The first heart catheterization on a human was performed by Werner Forssmann in Germany in 1929. He advanced a catheter into his own right atrium via his antecubital vein. There have been several trials and advancements since this time which have helped develop these procedures to their current level of sophistication. Diagnostic cardiac catheterization is performed all over the world and is now considered a minimally invasive procedure.

### Cardiac Catheterization

Heart catheterization involves manipulating a catheter from a specific extremity artery or vein access site into a ventricle or atrium and performing hemodynamic measurements. This may include intracardiac pressure measurements, oxygen saturation, and cardiac output. These measurements are used not only to identify how well the heart is functioning, but also to identify valvular disorders such as mitral and aortic stenoses.

Heart catheterizations can be performed in the left heart only, right heart only, or in the left and right heart. The left and right heart catheterization procedures can be performed in a variety of ways depending on the patient’s anatomy, presence of valvular prostheses, and pathologic condition of the valves. There are separate Current Procedural Terminology (CPT©) codes to describe heart catheterizations performed on patients with congenital anomalies. While these are usually children, sometimes adults with these anomalies are also studied. When a study is performed for a congenital anomaly, the right side of the heart will almost always be studied.

### Basic Coding Principles

Non-congenital anomaly cardiac catheterization codes are bundled procedures. The codes bundle catheterization of the chambers of the heart, contrast injections of the chambers and arteries, and radiologic supervision and interpretation, in most instances. The codes build on each other. There are codes for entering the cardiac chamber(s) for pressures (heart catheterization) and separate and distinct codes that include the heart catheterization procedure plus injections of coronary arteries and/or grafts. Left ventriculography is included in all the left heart catheterization codes, if done. In addition, the radiological supervision and interpretation is included in each of the non-congenital cardiac catheterization codes.

There are other services that are bundled and not reported separately with the cardiac catheterization procedure codes, including placement and repositioning of catheters, recording of cardiac chamber pressures, administration of medications into the coronary arteries, electrocardiographic and/or arterial oxygen saturation monitoring, placement of vascular closure devices, and imaging related to placement of the device. Note: For hospital billing, device code C1760, *Closure device, vascular (implantable/insertable)*, is reportable for the actual medical device.

There are three add-on codes for injection procedures that can be separately reported with congenital and non-congenital catheteriza-