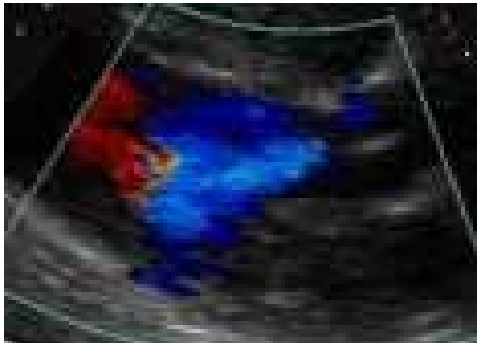


Echocardiography

April 2011, Volume 7, Issue 4



Above: 2D Echocardiogram
Below: Color Flow Study



Echocardiography is commonly used to assess the structure and the function of the heart. Lending to its popularity are the facts that it is a relatively inexpensive test, it is non-invasive, and it introduces virtually no risk to the patient. However, echocardiography arms the healthcare team with a large amount of pertinent data that frequently alters the course of patient management: sometimes ruling out cardiac causes for symptoms, other times providing a definitive diagnosis, and at other times it unveils the need to perform more intensive tests like nuclear imaging or heart catheterization.

Most echocardiographic studies include three components: two-dimensional echocardiography, Doppler interrogation, and color flow study. In prior years each of these components were separately reported with their own CPT codes; now they are most commonly reported with a single code. While there is a total of 18 echocardiography CPT codes in the “Echocardiography” section of CPT you will see that the most common echocardiographic study performed

Continued on Next Page

Member Questions & Answers

Question: Several years ago we hired a PA and a nurse to run our device clinic under our supervision. They run the clinic three days a week. Two days a week either my partner or myself are present and sign off on all charts after they perform the routine in office device follow-up. The patients get billed under either my partner or myself as appropriate. The third day, one of our cardiology partners is present and they oversee the clinic. My partner or I review the charts subsequently and sign them and the patients get billed under either of us as appropriate.

One of our billers/coders recently questioned whether this third day should be billed by us or by the cardiologist overseeing the clinic. Our feeling is that we have the expertise so it should be us. What do you think is appropriate?

Continued on Page 7

by cardiologists fit the description of code 93306 (Echocardiography, transthoracic, real-time with image documentation (2D), includes M-mode recording, when performed, complete, with spectral Doppler echocardiography, and with color flow Doppler echocardiography).

When challenged to provide supporting documentation for this common service, it is best to be familiar with each of the components in the code description. Just because most studies are reported with code 93306 does not mean that every echocardiographic report contains the documentation necessary to report this code. According to the National Correct Coding Initiative Policy Manual for Medicare Services, “Physicians must avoid upcoding. A HCPCS/CPT code may be reported only if all services described by that code have been performed.” Since Recovery Audit Contractors (RACs) look for definitive proof that all components of reported services are documented, it is beneficial to be familiar with the documentation requirements for this common service.

2-D Echocardiography

The first portion of code 93306’s definition is “Echocardiography, transthoracic, real-time with image documentation (2D), includes M-mode recording, when performed, complete.” This is a form of ultrasound used to non-invasively visualize the size and movement of heart structures. A device called a transducer is used to send millions of sound waves at many different angles into the patient’s chest. The sound waves travel into the chest, bounce off of the various cardiac structures, and then echo back to the transducer (just like your voice would echo back if you were to yell into a cave). Sophisticated computer equipment measures how long it takes for each sound wave make the round trip between the transducer and the various cardiac structures.

The captured data permits the computer to create a two-dimensional image of the functioning heart. The four cardiac chambers, four valves, pericardium (the fluid filled sac that surrounds the heart), and portions of the aorta can all be visualized in this matter. The 2-D image will either illustrate normal anatomy and cardiac function or diagnose problems: valvular calcification, abnormal wall motion, aortic root aneurysm, or pericardial effusion (an excess of fluid in the sac that surrounds the heart).

In addition to being included in the definition of code 93306, 2D echocardiography is also included in the definitions of codes 93307 (complete 2D echo without Doppler/Color Flow) and 93308 (Follow-up or Limited 2D echo).

Prior to 2005 the distinction between complete and limited echocardiographic studies was defined by only a small portion of payers. However, the 2005 edition of the Current Procedural Terminology (CPT) book established a nationwide distinction between these two services. The introductory section to the echocardiographic codes established that a full echocardiographic study is one that includes “two-dimensional and selected M-mode examination of the left and right atria, left and right ventricles, the aortic, mitral, and tricuspid valves, the pericardium, and adjacent portions of the aorta.” For each of these areas “appropriate measurements are obtained and recorded.”

The documentation standard established in the CPT book is very similar to the documentation requirements established by The Intersocietal Commission For The

Accreditation Of Echocardiography Laboratories (ICAEL). The ICAEL documentation requirements establish that a complete echocardiographic report must contain each of the following elements:

- 1) Left ventricle
- 2) Right ventricle
- 3) Left atrium
- 4) Right atrium
- 5) Aortic valve
- 6) Pulmonic valve
- 7) Mitral valve
- 8) Tricuspid valve
- 9) Proximal ascending aorta
- 10) Aortic arch (when indicated)
- 11) Inferior vena cava
- 12) Pericardium

CPT 2011 acknowledges that the industry standard (ICAEL) is more extensive than the definition included in the introductory text and paraphrased above. It specifically states, "Additional structures that may be visualized (eg, pulmonary veins, pulmonary artery, pulmonic valve, inferior vena cava) would be included as part of the service." Because of this special recognition, it would not be appropriate to affix the "Increased Procedural Service" modifier (22) if the report meets the ICAEL requirements, which are in excess of the CPT standard.

Most echocardiographic reports will be in line with the ICAEL standard. As such, they will exceed the minimum documentation requirements to report one of the codes defined as a comprehensive echocardiogram (93306 or 93307). However, some echo reports do not have all of the CPT or ICAEL required measurements. In these cases you need to report the service as a limited echocardiographic study or confirm that the report establishes significant effort was made to assess all of the structures and specifies why they could not all be assessed.

Sometimes an adequate "acoustic window" does not exist because the patient has unusually thick chest bones. In these situations, the report may establish that the study did not include assessment of all cardiac valves because of a poor acoustic window. CPT suggests that comments like this would allow us to still report the study as comprehensive even though it omitted a few of the key study components. CPT suggests this with the following guidance, "Despite significant effort, identification and measurement of some structures may not always be possible. In such instances, the reason that an element could not be visualized must be documented." The suggestion that it is acceptable to report a comprehensive study in these situations is supported by additional guidance which says, "a follow-up or limited echocardiographic study (93308) is an examination that does not evaluate or document the attempt to evaluate all the structures that comprise the complete echocardiographic exam."

As established by this later CPT billing Blue's Clues, if the report does not contain documentation of all nine required structures or the

attempt to evaluate all nine structures it is necessary to report the service as a limited echo (93308) rather than a complete echo (93306 vs. 93307). Since there are considerable pricing differences between the limited echo code and the complete echo codes, it is probably inevitable that RAC auditors will be going down the checklist of nine required report components for echocardiographic studies reported as being comprehensive. (93306 pays \$232.74, 93307 pays \$148.14, & 93308 pays \$105.33). It would be a great compliance initiative to pull a few echo reports from each doctor in your group to identify any shortcomings before it is too late to fix your report protocols; you may be surprised by what you find.

Doppler

Doppler imaging is based on an observation made by Christian Johann Doppler in 1842 (this is why “Doppler” should always be capitalized). The concept of the “Doppler effect” can most easily be explained with the analogy of waves in the ocean rather than with sound waves. The waves rolling into shore from the ocean move at a fairly constant rate. If a ship was to move from the shore out into sea, waves would hit the

front of the ship at a certain rate. If the ship was to move from the ocean toward the shore, the waves would make contact with the ship at a much slower rate: in the first example the ship is meeting each wave at the half-way point, in the second example the wave and the ship are moving in the same direction.

In the echo lab, the principal of the Doppler effect is applied to the sound waves that are being sent into the patient’s body. In essence, we are assessing how frequently and forcefully ultrasonic sound waves reflect off individual red blood cells. By measuring variations in the reflected sound waves, clinicians can determine the speed and direction of blood cells as they travel through the heart.

Doppler studies are used to assess valvular performance. The cardiac valves should open to facilitate blood flow in the proper direction and then close to prevent regurgitation (blood flow across the valve in the wrong direction). If valves are damaged or calcified they could allow a substantial amount of blood to flow in the wrong direction. By assessing the velocity and direction of blood flow on each side of the cardiac valves, clinicians can assess how much blood is flowing in the wrong direction. This is frequently referenced as quantifying valvular regurgitation. Doppler data also allows doctors to estimate the blood pressure inside the heart and the cardiac output.

As with the two-dimensional echocardiographic codes, CPT currently contains three codes that can be used to report the performance of a Doppler study. The second portion of code 93306’s definition is “with spectral Doppler echocardiography.” When Doppler assessment is performed outside the context of a complete echo (93306) it is still reportable with code 93320 (complete Doppler study) or 93321 (follow-up or limited Doppler study); both of these are “add-on” codes.

+93320 - Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); complete

+93321 - Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); follow-up or limited study

Unlike two-dimensional echocardiography, nothing in CPT establishes what the difference is between complete and limited Doppler studies. Fortunately, the previously referenced ICAEL documentation standard is pretty clear regarding the difference between these two tests. While this is not direct from CPT nor endorsed by CMS, it should serve you well as a working definition.

ICAEL establishes that, “The complete examination must include (except where technically unobtainable), but not be limited to...The following standard Doppler flow evaluations:

- 1) The four cardiac valves – forward flow spectra for each valve, and any regurgitation, shown in at least two imaging planes with color Doppler
- 2) For aortic stenosis, the systolic velocity must be evaluated from multiple transducer positions (e.g. apical, suprasternal and right parasternal). This must include interrogation from multiple views with a dedicated non-imaging continuous wave Doppler transducer (at least one clear envelope must be obtained).
- 3) Also use of non-imaging Doppler Transducer to assess stenotic valves, valvular regurgitation or whenever indicated.
- 4) The tricuspid regurgitation spectrum must always be sought with CW Doppler from multiple views for estimation of systolic right ventricular pressure when tricuspid regurgitation is present.
- 5) Atrial and ventricular septa – color Doppler screening for defects
- 6) Left ventricular outflow tract velocity
- 7) Velocity-time integrals and hepatic and pulmonary vein flow spectra are optional
- 8) Optional Doppler studies include: tissue Doppler, strain, strain-rate
- 9) Contrast studies are not required but should be considered when patients are technically difficult.
- 10) LV diastolic function should be evaluated through a combination of PW and tissue Doppler techniques.”

While this standard is not recognized by CMS, it should be considered an applicable guideline since there is such a high degree of overlap and concurrence between the CPT and ICAEL definitions regarding what constitutes a complete 2D echocardiogram.

The ICAEL Doppler documentation requirements include a mix of true Doppler data and color flow data. While Doppler and color flow go hand-in-hand, they are separately recognized in CPT by including “with color flow Doppler echocardiography” as the last portion of code 93306’s definition and by listing code 93325 “Doppler echocardiography color flow velocity mapping” as a separate add on code for studies that include a color flow study but do not include all of the study components required to report code 93306. Color flow assessment is addressed in the following section.

Color Flow

In this assessment, the computer utilizes the data obtained from the Doppler interrogation to label blood cells a certain color based on the direction in which they are traveling. Most systems label blood cells moving toward the transducer as red and

those which are moving away from the transducer as blue. By color coding blood cells based on the direction in which they are traveling, we can visually identify the presence and severity of valvular regurgitation. This will be illustrated by a contrasting jet of blood flowing in the wrong direction across a valve (a regurgitant jet). Color flow studies also allow clinicians to identify patent foramen ovale (PFO). This is an abnormal passage way between the right and left atria.

The color flow study is a visual assessment of the blood flowing through the heart. Unlike the two-dimensional and Doppler studies, the color flow study does not produce numeric measurements. While the ICAEL standard references that “any regurgitation, shown in at least two imaging planes with color Doppler” should be documented, there are no reliable guidelines regarding what needs to be definitively documented in the report to support the performance and interpretation of the color flow study. As such, it is best to specifically document that a color flow study was performed and to provide a brief summary of what it revealed: normal or abnormal.

Also unlike the two-dimensional echocardiography and Doppler studies, there are only two codes available to report a color flow study was performed (it is a component of code 93306 and it is an add on service reportable with code 93325). There is no distinction between complete and limited color flow studies.

93325 - Doppler echocardiography color flow velocity mapping (List separately in addition to codes for echocardiography)

Add-on Status:

As mentioned above, the Doppler and color flow codes (93320, 93321, & 93325) are “add on” codes. This is indicated in CPT by the “+” symbol listed next to these codes. CPT also contains notes indicating that we should only report these add on codes when certain base codes are reported. The following is a summary of these acceptable base codes:

+93320, acceptable base codes: 93303, 93304, 93312, 93314, 93315, 93317, 93350, 93351.

+93321, acceptable base codes: 93303, 93304, 93312, 93314, 93315, 93317, 93350, 93351

+93325, acceptable base codes: 76825, 76826, 76827, 76828, 93303, 93304, 93308, 93312, 93314, 93315, 93317, 93350, 93351

With national Medicare allowed amounts of \$105.33, \$65.52 & \$35.68 respectively, codes 93308, 93320 and 93325 generate a total of \$206.53 – a reduction of just \$26.21 compared to the reimbursement amount of \$232.74 for code 93306.

Because the reimbursement reduction is so small, non-ICAEL accredited echo labs may find it advantageous to perform and report limited echocardiographic studies rather than ones that are comprehensive. The efficiencies created by not having to jump through the CPT mandated documentation standard may offset this \$26.21 payment reduction. For example, assessment of the right atrial size is required by CPT in order to report a complete echo but this is not a critical measurement.

In addition to flexibility regarding documentation, reporting limited studies insulates against RAC penalties.

Member Questions (continued from page 1)

Answer: It is fine to keep reporting them the way you are. CMS attempted to require the technical component of diagnostic tests to be performed by the actual supervising physician and the professional component of the test to be billed by the actual interpreting physician if they are not the same provider. Before the new standard became official they were overwhelmed by complaints that it would cripple many practices and create a tremendous amount of administrative burden when reporting common office-based services like device checks, echocardiograms, nuclear imaging, etc. CMS repealed the requirement and now it does not matter – the way you are billing it (under the doctor who performs the interpretation) is fine.

Question: Can you please explain when and how CMS implements the multiple procedure reduction? We are attempting to develop a physician compensation model that correlates to relative value units with the assumption that compensation would be relative to the revenue attributable to each partner in the practice. Our payment posters tell us that revenue will sometimes be

less than the allowed amount because of this multiple procedure reduction – we need to get firm handle on what this entails.

Answer: Each CPT code has a Medicare allowed amount and an expected payment amount. To arrive at the expected payment amount (in the bank money) you must consider the impact of Medicare's multiple procedure reduction policy. In short, Medicare reduces the allowed amount for certain operative procedures by 50% when they are performed during the same operative session as a more extensive operative procedure that is also impacted by the multiple procedure reduction policy.

The most extensive operative procedure performed during the operation (impacted by the multiple procedure reduction) is compensated at the full Medicare allowable; each of the other surgical procedures (impacted by the multiple procedure reduction) is reduced by 50% to adjust for the economies of scale. To calculate the impact of the multiple procedure reduction on any collection of CPT codes, obtain the RVU data, and payment data it is necessary to reference at the website the following CMS web site: <http://www.cms.gov/apps/physician-fee-schedule/search/search-criteria.aspx>

After accepting the terms of use, you will be prompted to select what data you want; here is a screen shot illustrating how to assess the multiple procedure reduction impact on SVT ablation:

Type of Information:

- Pricing Information
- Payment Policy Indicators
- Relative Value Units
- Geographic Practice Cost Index
- All

Select Healthcare Common Procedure Coding System (HCPCS) Criteria:

- Single HCPCS Code
- List of HCPCS Codes
- Range of HCPCS Codes

Select Carrier/Medicare Administrative Contractor (MAC) Option:

- National Payment Amount
- Specific Carrier/MAC
- Specific Locality
- All Carriers/MACs

All (Pricing and Policy Info.) by List of HCPCS Codes for a Carrier/MAC Locality

Enter values for:

HCPCS Code 1: 93620
 HCPCS Code 2: 93621
 HCPCS Code 3: 93609
 HCPCS Code 4: 93651
 HCPCS Code 5:

Modifier:

All Modifiers

Carrier/MAC Locality:

1020201 Atlanta, GA

The results that the website returns are presented in the two screen shots presented on the following page; these screen shots contain all of the information necessary. Please refer to the screen shots to confirm where the data comes from.

To determine which line items on the claim will be reduced by 50% you need to identify which ones are impacted by the multiple procedure reduction (for cardiology services, they will all be marked with a “2” in the “MULT SURG” column. Of the codes on the claim form impacted by the multiple procedure reduction (93620 & 93651), the highest paying one (93651) will be compensated at 100%, the other (93620) will be compensated at 50%.

For an SVT ablation case (including a comprehensive EP study, LA Pacing and Recording, 2D Mapping, and the SVT Ablation code), the following payment information applies; all of this is culled directly from the screenshots presented on the following page. While every SVT ablation does not consist of the same collection of codes, the collection presented is quite common.

Code	Desc.	Allowed \$	Multiple	Adjusted for Multiple
93609-26	2D Mapping	\$287.95	NO	\$287.958
93620-26	EP Study	\$669.57	YES	\$334.79
93621-26	LA Pace/Rec	\$120.93	NO	\$120.93
93651	SVT Ablate	\$936.94	YES	\$936.94
TOTAL				\$1,680.61

On Demand Training

The online store at cardiologycoder.com is full of great training programs that will cultivate and hone your cardiology coding expertise.

Collectively, these programs will prepare you to ace the Certified Cardiology Coder (CCC) specialty credentialing exam offered by the American Academy of Professional Coders (AAPC).

You do not need to be a Certified Professional Coder (CPC) to take the CCC certification exam; you just need to fully understand the coding and billing issues we deal with on a regular basis in cardiology.

The on-demand training library is structured in a way that will prepare you to pass the certification exam efficiently, effectively, conveniently, and at minimal expense.

Visit the online store today to see the scope of on-demand and live training programs currently available. Additional programs will be added in the future.

Thank you for the opportunity to provide training programs and for your investment in membership; I appreciate it.

Jim Collins, CPC, CCC

HCPCS CODE	MODIFIER	CARRIER LOCALITY	NON-FACILITY PRICE	FACILITY PRICE	NON-FACILITY LIMITING CHARGE	FACILITY LIMITING CHARGE	GPCI WORK	GPCI PE	GPCI MP	PROC STAT	WORK RVU	NA FLAG FOR TRANS NON-FAC PE RVU
93609	26	1020201	\$287.95	\$287.95	\$314.58	\$314.58	1.006	1.006	0.890	A	4.99	
93620	26	1020201	\$669.57	\$669.57	\$731.51	\$731.51	1.006	1.006	0.890	A	11.57	
93621	26	1020201	\$120.93	\$120.93	\$132.12	\$132.12	1.006	1.006	0.890	A	2.10	
93651		1020201	NA	\$936.94	NA	\$1,023.61	1.006	1.006	0.890	A	16.23	NA

Navigation bar with scroll arrows and a vertical line indicator.

1

View Items Per Page: 10 Go

FULLY IMPLEMENTED NON-FAC TOTAL	FULLY IMPLEMENTED FACILITY TOTAL	PCTC	GLOBAL	PRE OP	INTRA OP	POST OP	MULT SURG	BILT SURG	ASST SURG	CO SURG	TEAM SURG	PHYS SUPV	MED SUP COI
8.03	8.03	1	ZZZ	0.00	0.00	0.00	0	0	0	0	0	09	
18.61	18.61	1	0	0.00	0.00	0.00	2	0	0	0	0	09	
3.37	3.37	1	ZZZ	0.00	0.00	0.00	0	0	0	0	0	09	
26.11	26.11	0	0	0.00	0.00	0.00	2	0	0	0	0	09	

Navigation bar with scroll arrows and a vertical line indicator.

1

View Items Per Page: 10 Go