

**MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES (MDHHS)
CARDIAC CATHETERIZATION
STANDARD ADVISORY COMMITTEE (CCSAC) MEETING**

Thursday, November 9, 2017

South Grand Building
333 S. Grand Ave,
1st Floor, Grand Conference Room
Lansing, MI 48933

APPROVED MINUTES

I. Call to Order

Interim Chairperson Dixon called the meeting to order at 9:30 a.m.

A. Members Present:

Ernest Balcueva – American Heart Association (arrived at 9:57 a.m.)
Lynne F. Carter, MD – Blue Cross Blue Shield of Michigan (arrived at 10:08 a.m.)
Michele L. Davis – Electrical Workers’ Joint Board of Trustees
Simon Dixon, MD – Beaumont Hospital – Interim Chairperson
Hitinder S. Gurm, MD – University of Michigan (left at 11:13 a.m.)
Henry E. Kim, MD – Henry Ford Health System
Ryan D. Madder, MD – Spectrum Health
Theodore L. Schreiber, MD – Detroit Medical Center
Kristopher J. Selke, DO – Mercy Health & St. Joseph Mercy Health System
Ibrahim Shah, MD – McLaren Greater Lansing (arrived at 9:41 a.m.)
Sunita Vadakath, MD – MidMichigan Health (arrived at 9:47 a.m.)

B. Members Absent:

Shukri David, MD, Chairperson – Ascension | Michigan

C. Michigan Department of Health and Human Services Staff present:

Amber Myers
Beth Nagel
Tania Rodriguez
Brenda Rogers

II. Declaration of Conflicts of Interests

No conflicts were declared.

III. Review of Agenda

Motion by Dr. Gurm, seconded by Dr. Madder to approve the agenda as presented. Motion Carried.

IV. Review and Approval of October 19, 2017 Minutes

Motion by Dr. Selke, seconded by Dr. Davis to approve the minutes as presented. Motion Carried.

V. Discussion of Charge #5: Review section 11 to determine if it is appropriate to incorporate additional interventional procedures that are performed in a cardiac catheterization laboratory but are not currently identified or weighted in section 11

Dr. Dixon presented on the topic. (See Attachment A – Section 11 Methodology)

Discussion followed.

VI. Discussion of Charge #3: Consider the following definitions and determine if revisions are necessary: Primary Percutaneous Coronary Intervention (PCI); diagnostic cardiac catheterization service; elective PCI services without on-site OHS; therapeutic cardiac catheterization service and electrophysiology study

Dr. Dixon presented on the topic. (See Attachment B)

Discussion followed.

Public Comment

Melissa Cupp, RWC Advocacy

Motion by Dr. Schreiber, seconded by Dr. Selke to make the addition to the standards as presented for Section 11. Motion Carried in a vote of 11-Yes, 0 - No, and 0- Abstained.

Motion by Dr. Schreiber, seconded by Dr. Selke to make the addition to the standards as presented for definitions. Motion Carried in a vote of 11 -Yes, 0 - No, and 0- Abstained.

Dr. Dixon will provide updated proposed language to the Department.

VII. Discussion of Therapeutic Cardiac Catheterization volume requirements and exclusion of certain procedures in Section 10(2)(d)

Dr. Madder presented on the topic. (See Attachment C)

Discussion followed.

Public Comment

Patrick O'Donovan, Beaumont

Motion by Dr. Selke, seconded by Dr. Gurm to make the addition to the standards as presented in the slides with additional changes. Motion Carried in a vote of 11-Yes, 0 - No, and 0- Abstained.

Updated language will be provided to the Department.

VIII. Next Steps

Drs. David and Dipak Shah will report back on Charge #2 *“Determine if pacemakers and implantable cardioverter defibrillator (ICD) implants should be allowed to be performed in ambulatory surgical centers (ASCs) or only in licensed hospitals.”*

Review simple ablation procedures at hospitals without on-site surgery at December meeting.

Review the draft language at December meeting.

IX. Future Meeting Dates

December 20, 2017

X. Public Comment

None.

XI. Adjournment

Meeting adjourned at 11:15 A.M.

CERTIFICATE OF NEED (CON) REVIEW STANDARDS FOR CARDIAC CATHETERIZATION SERVICES

Section 11. Methodology for computing procedure equivalents for a cardiac catheterization laboratory

The following shall be used in calculating procedure equivalents and evaluating utilization of a cardiac catheterization laboratory.

Procedure Type	Description	Procedure Equivalent	
		Adult	Pediatric
Diagnostic cardiac/peripheral session	Right heart catheterization, left heart catheterization, coronary angiography, coronary artery bypass graft angiography, intracoronary administration of drugs, fractional flow reserve (FFR), intra-coronary imaging (intravascular ultrasound (IVUS), optical coherence tomography (OCT)) when performed without a therapeutic procedure, cardiac biopsy, intra-cardiac echocardiography (ICE), diagnostic electrophysiology study, angiography in the peripheral arterial or venous circulation	1.5	2.7
Therapeutic cardiac session	PCI, pericardiocentesis, pacemaker implantation, ICD implantation (endovascular or subcutaneous), cardiac ablation (excluding AF/VT), and/or structural heart intervention (excluding those listed below)	2.7	4.0
Therapeutic peripheral session	Percutaneous transluminal angioplasty (PTA), atherectomy, laser, stent implantation, IVC filter implantation or retrieval, catheter-directed ultrasound/thrombolysis, thrombectomy	2.7	4.0
Complex therapeutic session	PCI for chronic total occlusion (CTO), TAVR, mitral/pulmonary/tricuspid valve repair or replacement, paravalvular leak closure, ablation for atrial fibrillation (AF) or ventricular tachycardia (VT), pacemaker or ICD lead extraction	4.0	7.0
Outlier session	Cardiac therapeutic session >6 hours	6.0	

Procedure equivalents from peripheral diagnostic and therapeutic procedures count toward the volume requirement for initiation of cardiac catheterization services (Section 3) and expansion of a cardiac catheterization service (Section 6).

Section 2. Definitions [New language highlighted red] Blue=changes since distribution on 11/6/17

“Adult cardiac catheterization service” means providing cardiac catheterization services on an organized, regular basis to patients age 18 and above, and for electrophysiology procedures to patients age 15 and older.

“Cardiac catheterization laboratory” or “laboratory” means an individual radiological room equipped with a variety of x-ray machines and devices such as electronic image intensifiers, [delete] high speed film changers and digital subtraction units to assist in performing diagnostic or therapeutic cardiac catheterizations or electrophysiology studies.

“Cardiac catheterization service” means the provision of one or more of the following types of procedures: adult diagnostic cardiac catheterizations; adult therapeutic cardiac catheterizations; and pediatric/congenital cardiac catheterizations.

“Cardiac catheterization session” means a continuous time period during which a patient may undergo one or more diagnostic or therapeutic cardiac or peripheral procedures in a cardiac catheterization laboratory. The term session applies to both adult and pediatric catheterizations.

“Complex therapeutic session” means a continuous time period during which a patient undergoes one or more of the following procedures: a) PCI for chronic total occlusion, b) TAVR, mitral/pulmonary/tricuspid valve repair or replacement, paravalvular leak closure, c) Ablation for atrial fibrillation (AF) or ventricular tachycardia (VT), pacemaker or ICD lead extraction.

“Diagnostic cardiac catheterization service” means providing diagnostic cardiac catheterization procedures on an organized, regular basis in a laboratory to diagnose anatomical and/or physiological problems in the heart. [The remainder of this paragraph was split to below]

“Diagnostic cardiac catheterization procedure” includes right heart catheterization, left heart catheterization, coronary angiography, coronary artery bypass graft angiography, intracoronary administration of drugs, fractional flow reserve (FFR), intra-coronary imaging (intravascular ultrasound (IVUS), optical coherence tomography (OCT)) when performed without a therapeutic procedure, cardiac biopsy, intra-cardiac echocardiography, and electrophysiology study.

“Diagnostic cardiac catheterization session” means a continuous time period during which a patient may undergo one or more diagnostic cardiac catheterization procedures.

“Diagnostic peripheral procedure” includes angiography or hemodynamic measurements in the arterial or venous circulation (excluding the heart).

“Diagnostic peripheral session” means a continuous time period during which a patient may undergo one or more diagnostic peripheral procedures in a cardiac catheterization laboratory.

“Pediatric/congenital cardiac catheterization service” means providing cardiac catheterization services on an organized, regular basis to infants and children ages 18 and below, and patients of any age born with congenital heart disease. ~~except for electrophysiology studies that are offered and provided to infants and children ages 14 and below, and other patients with congenital heart disease as defined by the ICD-9-CM codes (See Appendix B for ICD-10-CM Codes) of 426.7 (anomalous atrioventricular~~

excitation), 427.0 (cardiac dysrhythmias), and 745.0 through 747.99 (bulbus cordis anomalies and anomalies of cardiac septal closure, other congenital anomalies of heart, and other congenital anomalies of circulatory system).

“Percutaneous coronary intervention” (PCI) means a therapeutic cardiac catheterization procedure to resolve anatomic and/or physiologic problems in the coronary arteries of the heart. A PCI session may include several procedures including balloon angioplasty, atherectomy, laser, stent implantation and thrombectomy. The term does not include the intracoronary administration of drugs, FFR or IVUS where these are the only procedures performed.

“Peripheral catheterization session” means a continuous time period during which a patient may undergo one or more diagnostic or therapeutic procedures in the arterial or venous circulation (excluding the heart) when performed in a cardiac catheterization laboratory.

“Primary percutaneous coronary intervention (PCI)” means PCI performed on an emergent basis on a patient with ST-segment elevation, new left bundle branch block, ECG evidence of true posterior MI, or cardiogenic shock.

“Procedure equivalent” means a unit of measure that reflects the average length of time one patient spends in one session in a cardiac catheterization laboratory. This length of time means the period from when the patient enters (“wheels-in”) and leaves (“wheels-out”) the laboratory. If a diagnostic and therapeutic procedure is performed in the same session, the higher procedure equivalent weighting will be used to evaluate utilization.

“Structural heart procedure” means a therapeutic cardiac catheterization procedure to resolve anatomic and/or physiologic problems of the heart valves or chambers. Procedures include: balloon valvuloplasty, balloon atrial septostomy, transcatheter valve repair, transcatheter valve implantation, paravalvular leak closure, left atrial appendage occlusion, PFO/ASD/VSD/PDA closure, alcohol ablation of cardiac tissue, embolization of coronary fistulae and abnormal vascular connections in the heart.

“Therapeutic cardiac catheterization service” means providing cardiac catheterizations on an organized, regular basis in a cardiac catheterization laboratory to treat and resolve anatomic and/or physiological problems in the heart. [Paragraph was split – see below]

“Therapeutic cardiac catheterization session” may include: PCI (elective, emergent), pericardiocentesis, permanent pacemaker implantation, ICD implantation (endovascular or subcutaneous), cardiac ablation, and/or structural heart intervention. This also includes implantation of a circulatory support device such as IABP, Impella or ECMO where this is the only therapeutic procedure. When PCI is performed in more than one coronary artery during the same setting, this is counted as one session.

“Therapeutic peripheral procedure” means a therapeutic catheterization procedure to resolve anatomic and/or physiologic problems in the arterial or venous circulation (excluding the heart). Procedures may include percutaneous transluminal angioplasty (PTA), atherectomy, laser, stent implantation, IVC filter implantation or retrieval, catheter-directed ultrasound/thrombolysis, and thrombectomy.

“Therapeutic peripheral session” means a continuous time period during which a patient may undergo one or more therapeutic peripheral procedures in a cardiac catheterization laboratory.

“Therapeutic pediatric/congenital cardiac catheterization session” may include: structural heart procedure (as listed above), pulmonary artery angioplasty/stent implantation, pulmonary valve perforation, angioplasty/stent implantation for aortic coarctation, cardiac ablation, pacemaker/ICD implantation, and PCI.

MICHIGAN DEPARTMENT OF COMMUNITY HEALTH
CERTIFICATE OF NEED (CON) REVIEW STANDARDS
FOR CARDIAC CATHETERIZATION SERVICES

(By authority conferred on the CON Commission by Section 22215 of Act No. 368 of the Public Acts of 1978, as amended, and sections 7 and 8 of Act No. 306 of the Public Acts of 1969, as amended, being sections 333.22215, 24.207 and 24.208 of the Michigan Compiled Laws.)

Section 1. Applicability

Sec. 1. (1) These standards are requirements for approval of the initiation, replacement, expansion, or acquisition of cardiac catheterization services, and the delivery of these services under Part 222 of the Code. Pursuant to Part 222 of the Code, cardiac catheterization services are a covered clinical service. The Department shall use these standards in applying Section 22225(1) of the Code, being Section 333.22225(1) of the Michigan Compiled Laws and Section 22225(2)(c) of the Code, being Section 333.22225(2)(c) of the Michigan Compiled Laws.

Section 2. Definitions

Sec. 2. (1) For purposes of these standards:

(a) "Cardiac catheterization laboratory" or "laboratory" means an individual radiological room equipped with a variety of x-ray machines and devices such as electronic image intensifiers, high speed film changers and digital subtraction units to assist in performing diagnostic or therapeutic cardiac catheterizations or electrophysiology studies.

(b) "Cardiac catheterization procedure" means any cardiac procedure, including diagnostic, therapeutic, and electrophysiology studies, performed on a patient during a single session in a laboratory. Cardiac catheterization is a medical diagnostic or therapeutic procedure during which a catheter is inserted into a vein or artery in a patient; subsequently the free end of the catheter is manipulated by a physician to travel along the course of the blood vessel into the chambers or vessels of the heart. X-rays and an electronic image intensifier are used as aides in placing the catheter tip in the desired position. When the catheter is in place, the physician is able to perform various diagnostic studies and/or therapeutic procedures in the heart. This term does not include "float catheters" that are performed at the bedside or in settings outside the laboratory or the implantation of cardiac permanent pacemakers and implantable cardioverter defibrillators (ICD) devices that are performed in an interventional radiology laboratory or operating room.

(c) "Cardiac catheterization service" means the provision of one or more of the following types of procedures: adult diagnostic cardiac catheterizations; adult therapeutic cardiac catheterizations; and pediatric cardiac catheterizations.

(d) "Certificate of Need Commission" or "Commission" means the Commission created pursuant to Section 22211 of the Code, being Section 333.22211 of the Michigan Compiled Laws.

(e) "Code" means Act No. 368 of the Public Acts of 1978, as amended, being Section 333.1101 et seq. of the Michigan Compiled Laws.

(f) "Department" means the Michigan Department of Community Health (MDCH).

(g) "Diagnostic cardiac catheterization service" means providing diagnostic cardiac catheterization procedures on an organized, regular basis in a laboratory to diagnose anatomical and/or physiological problems in the heart. Procedures include the intra coronary administration of drugs; left heart catheterization; right heart catheterization; coronary angiography; diagnostic electrophysiology studies; and cardiac biopsies (echo-guided or fluoroscopic). A hospital that provides diagnostic cardiac catheterization services may also perform implantations of cardiac permanent pacemakers and ICD devices.

(h) "Elective percutaneous coronary intervention (PCI)" means a PCI procedure performed on a non-emergent basis.

(i) "Elective PCI services without on-site open heart surgery (OHS)" means performing PCI, percutaneous transluminal coronary angioplasty (PTCA), and coronary stent implantation on an organized, regular basis in a hospital having a diagnostic cardiac catheterization service and a primary PCI service but not having OHS on-site and adhering to patient selection as outlined in the SCAI/ACC/AHA Expert Consensus Document: 2014 Update on PCI Without On-Site Surgical Backup and published in circulation 2014, 129:2610-2626 and its update or further guideline changes.

(j) "Electrophysiology study" means a study of the electrical conduction activity of the heart and characterization of atrial and ventricular arrhythmias obtained by means of a cardiac catheterization procedure. The term also includes the implantation of permanent pacemakers and ICD devices.

(k) "Hospital" means a health facility licensed under Part 215 of the Code.

(l) "Medicaid" means title XIX of the social security act, chapter 531, 49 Stat. 620, 42 U.S.C. 1396 to 1396g and 1396i to 1396u.

(m) "Pediatric cardiac catheterization service" means providing cardiac catheterization services on an organized, regular basis to infants and children ages 18 and below, except for electrophysiology studies that are offered and provided to infants and children ages 14 and below, and others with congenital heart disease as defined by the ICD-9-CM codes (See Appendix B for ICD-10-CM Codes) of 426.7 (anomalous atrioventricular excitation), 427.0 (cardiac dysrhythmias), and 745.0 through 747.99 (bulbus cordis anomalies and anomalies of cardiac septal closure, other congenital anomalies of heart, and other congenital anomalies of circulatory system).

(n) "Primary percutaneous coronary intervention (PCI)" means a PCI performed on an acute myocardial infarction (AMI) patient with confirmed ST elevation or new left bundle branch block on an emergent basis.

(o) "Primary PCI service without on-site OHS" means performing primary PCI on an emergent basis in a hospital having a diagnostic cardiac catheterization service.

(p) "Procedure equivalent" means a unit of measure that reflects the relative average length of time one patient spends in one session in a laboratory based on the type of procedures being performed.

(q) "Therapeutic cardiac catheterization service" means providing therapeutic cardiac catheterizations on an organized, regular basis in a laboratory to treat and resolve anatomical and/or physiological problems in the heart. Procedures include PCI, PTCA, atherectomy, stent, laser, cardiac valvuloplasty, balloon atrial septostomy, catheter ablation, cardiac permanent pacemaker, ICD device implantations, transcatheter valve, other structural heart disease procedures, PTCA with coronary stent implantation and left sided arrhythmia therapeutic procedures. The term does not include the intra coronary administration of drugs where that is the only therapeutic intervention.

(2) Terms defined in the Code have the same meanings when used in these standards.

Section 3. Requirements to initiate cardiac catheterization services

Sec. 3. An applicant proposing to initiate cardiac catheterization services shall demonstrate the following, as applicable to the proposed project.

(1) An applicant proposing to initiate an adult diagnostic cardiac catheterization service shall demonstrate the following as applicable to the proposed project:

(a) An applicant proposing to initiate a diagnostic cardiac catheterization service with a single laboratory in a rural or micropolitan statistical area county shall project a minimum of 500 procedure equivalents including 300 procedure equivalents in the category of diagnostic cardiac catheterization procedures based on data from the most recent 12-month period preceding the date the application was submitted to the Department.

(b) An applicant proposing to initiate a diagnostic cardiac catheterization service with a single laboratory in a metropolitan statistical area county shall project a minimum of 750 procedure equivalents that includes 300 procedure equivalents in the category of diagnostic cardiac catheterization procedures based on data from the most recent 12-month period preceding the date the application was submitted to the Department.

(c) An applicant proposing to initiate a diagnostic cardiac catheterization service with two or more laboratories shall project a minimum of 1,000 procedure equivalents per laboratory that includes 300 procedure equivalents in the category of diagnostic cardiac catheterization procedures based on data from the most recent 12-month period preceding the date the application was submitted to the Department.

(2) An applicant proposing to initiate an adult therapeutic cardiac catheterization service shall demonstrate the following:

(a) The applicant provides, is approved to provide, or has applied to provide adult diagnostic cardiac catheterization services at the hospital. The applicant must be approved for adult diagnostic cardiac catheterization services in order to be approved for adult therapeutic cardiac catheterization services.

(b) An applicant operating an adult diagnostic cardiac catheterization service has performed a minimum of 300 procedure equivalents in the category of adult diagnostic cardiac catheterizations during the most recent 12-month period preceding the date the application was submitted to the Department if the service has been in operation more than 24 months.

(c) The applicant has applied to provide adult OHS services at the hospital. The applicant must be approved for an adult OHS service in order to be approved for an adult therapeutic cardiac catheterization service.

(d) The applicant shall project a minimum of 300 procedure equivalents in the category of adult therapeutic cardiac catheterizations based on data from the most recent 12-month period preceding the date the application was submitted to the Department.

(3) An applicant proposing to initiate a pediatric cardiac catheterization service shall demonstrate the following:

(a) The applicant has a board certified pediatric cardiologist with training in pediatric catheterization procedures to direct the pediatric catheterization laboratory.

(b) The applicant has standardized biplane equipment as defined in the most current American Academy of Pediatrics (AAP) and American College of Cardiology Foundation (ACCF)/Society for Cardiovascular Angiography and Interventions (SCAI) guidelines for pediatric cardiovascular centers.

(c) The applicant has on-site pediatric and neonatal ICU as outlined in the most current AAP and ACCF/SCAI guidelines above.

(d) The applicant has applied to provide pediatric OHS services at the hospital. The applicant must be approved for a pediatric OHS service in order to be approved for pediatric cardiac catheterization services.

(e) The applicant has on-site pediatric extracorporeal membrane oxygenation (ECMO) capability as outlined in the most current ACCF/SCAI guidelines.

(f) A pediatric cardiac catheterization service shall have a quality assurance plan as outlined in the most current ACCF/SCAI guidelines.

(g) The applicant shall project a minimum of 600 procedure equivalents in the category of pediatric cardiac catheterizations based on data from the most recent 12-month period preceding the date the application was submitted to the Department.

Section 4. Requirements to initiate primary or elective PCI Services without on-site OHS services

Sec. 4. An applicant proposing to initiate primary or elective PCI services without on-site OHS services shall demonstrate the following:

(1) The applicant operates an adult diagnostic cardiac catheterization service that has performed a minimum of 500 procedure equivalents that includes 400 procedure equivalents in the category of cardiac catheterization procedures during the most recent 12 months preceding the date the application was submitted to the Department.

(2) The applicant has at least two interventional cardiologists to perform the PCI procedures and each cardiologist has performed at least 50 PCI sessions annually as the primary operator during the most recent 24-month period preceding the date the application was submitted to the Department.

(3) The nursing and technical catheterization laboratory staff: are experienced in handling acutely ill patients and comfortable with interventional equipment; have acquired experience in dedicated interventional laboratories at an OHS hospital; and participate in an un-interrupted 24-hour, 365-day call schedule. Competency shall be documented annually.

(4) The laboratory or laboratories are equipped with optimal imaging systems, resuscitative equipment, and intra-aortic balloon pump (IABP) support, and stocked with a broad array of interventional equipment.

(5) The cardiac care unit nurses are adept in hemodynamic monitoring and IABP management. Competency shall be documented annually.

(6) A written agreement with an OHS hospital that includes all of the following:

(a) Involvement in credentialing criteria and recommendations for physicians approved to perform PCI procedures.

(b) Provision for ongoing cross-training for professional and technical staff involved in the provision of PCI to ensure familiarity with interventional equipment. Competency shall be documented annually.

(c) Provision for ongoing cross training for emergency department, catheterization laboratory, and critical care unit staff to ensure experience in handling the high acuity status of PCI patient candidates. Competency shall be documented annually.

(d) Regularly held joint cardiology/cardiac surgery conferences to include review of all PCI cases.

(e) Development and ongoing review of patient selection criteria for PCI patients and implementation of those criteria.

(f) A mechanism to provide for appropriate patient transfers between facilities and an agreed plan for prompt care.

(g) Written protocols, signed by the applicant and the OHS hospital, for the immediate transfer within 60 minutes travel time from the cardiac catheterization laboratory to evaluation on site in the OHS hospital, of patients requiring surgical evaluation and/or intervention 365 days a year. If the applicant meets the requirements of subsection (13)(c), then the OHS hospital can be more than 60 minutes travel time from the proposed site. The protocols shall be reviewed and tested on a quarterly basis.

(h) Consultation on facilities, equipment, staffing, ancillary services, and policies and procedures for the provision of interventional procedures.

(7) A written protocol must be established and maintained for case selection for the performance of PCI.

(8) A system to ensure prompt and efficient identification of potential primary PCI patients and rapid transfer from the emergency department to the cardiac catheterization laboratory must be developed and maintained so that door-to-balloon targets are met.

(9) At least two physicians credentialed to perform PCI must commit to functioning as a coordinated group willing and able to provide this service at the hospital on a 24-hour per day, 365 day per year call schedule, with ability to be on-site and available to operate within 30 minutes of identifying the need for primary PCI. These physicians must be credentialed at the facility and actively collaborate with administrative and clinical staff in establishing and implementing protocols, call schedules, and quality assurance procedures pertaining to PCI designed to meet the requirements for this certification and in keeping with the current guidelines for the provision of PCI without on-site OHS services promulgated by the American College of Cardiology and American Heart Association.

(10) The applicant hospital shall participate in a data registry administered by the Department or its designee as a means to measure quality and risk adjusted outcomes within PCI services without on-site OHS services, and the applicant hospital shall identify a physician point of contact for the data registry.

(11) Cath lab facility requirements and collaborative cardiologists-heart surgeon relationship requirements shall conform to all SCAI/ACC Guidelines for PCI Services Without On-Site OHS including the SCAI/ACC/AHA Expert Consensus Document. The applicant hospital shall be liable for the cost of demonstrating compliance with these criteria in their application.

(12) The applicant shall project the following based on data from the most recent 12-month period preceding the date the application was submitted to the Department, as applicable.

(a) If the applicant is applying for a primary PCI service without open heart surgery, the applicant shall project a minimum of 36 primary PCI procedures per year.

(b) If the applicant is applying for an elective PCI service without on-site OHS, the applicant shall project a minimum of 200 PCI procedures per year.

(13) If the applicant is applying for an elective PCI service without on-site OHS, the applicant also shall demonstrate the following:

(a) The applicant operated a primary PCI service for at least one year prior to the date of application.

(b) The applicant submitted data to a data registry administered by the Department or its designee and been found to have acceptable performance as compared to the registry benchmarks for the most recent 12 months prior to the date of application.

(c) If the applicant was not approved as a primary PCI service prior to September 14, 2015, then, in addition, the applicant shall demonstrate that there is no PCI or OHS service within 60 radius miles or 60 minutes travel time from the proposed site.

(14) If the applicant is currently providing OHS services and therapeutic cardiac catheterization services and is proposing to discontinue OHS services and therapeutic cardiac catheterization services, then the applicant shall apply to initiate primary or elective PCI services without on-site OHS using this section. The applicant shall demonstrate all of the requirements in this section except for subsection (13) and is subject to all requirements in Section 10.

Section 5. Requirements to replace an existing cardiac catheterization service or laboratory

Sec. 5. Replacing a cardiac catheterization laboratory means a change in the angiography x-ray equipment or a relocation of the service to a new site. The term does not include a change in any of the other equipment or software used in the laboratory. An applicant proposing to replace a cardiac catheterization laboratory or service shall demonstrate the following as applicable to the proposed project:

(1) An applicant proposing to replace cardiac catheterization laboratory equipment shall demonstrate the following:

(a) The existing laboratory or laboratories to be replaced are fully depreciated according to generally accepted accounting principles or demonstrates either of the following:

(i) The existing angiography x-ray equipment to be replaced poses a threat to the safety of the patients.

(ii) The replacement angiography x-ray equipment offers technological improvements that enhance quality of care, increases efficiency, and reduces operating costs.

(b) The existing angiography x-ray equipment to be replaced will be removed from service on or before beginning operation of the replacement equipment.

(2) An applicant proposing to replace a cardiac catheterization service to a new site shall demonstrate the following:

(a) The proposed project is part of an application to replace the entire hospital.

(b) The applicant has performed the following during the most recent 12-month period preceding the date the application was submitted to the Department as applicable to the proposed project:

(i) A minimum of 300 procedure equivalents in the category of adult diagnostic cardiac catheterization procedures.

(ii) A minimum of 300 procedure equivalents in the category of adult therapeutic cardiac catheterization procedures.

(iii) A minimum of 600 procedure equivalents in the category of pediatric cardiac catheterization procedures.

(iv) A minimum of 500 procedure equivalents for a hospital in a rural or micropolitan county with one laboratory.

(v) A minimum of 750 procedure equivalents for a hospital in a metropolitan county with one laboratory.

(vi) A minimum of 1,000 procedure equivalents per cardiac catheterization laboratory for a hospital with two or more laboratories.

(c) The existing cardiac catheterization service has been in operation for at least 36 months as of the date the application has been submitted to the Department.

Section 6. Requirements to expand a cardiac catheterization service

Sec. 6. An applicant proposing to add a laboratory to an existing cardiac catheterization service shall demonstrate the following:

(1) The applicant has performed the following during the most recent 12-month period preceding the date the application was submitted to the Department as applicable to the proposed project:

(a) A minimum of 300 procedure equivalents in the category of adult diagnostic cardiac catheterization procedures.

(b) A minimum of 300 procedure equivalents in the category of adult therapeutic cardiac catheterization procedures.

(c) A minimum of 600 procedure equivalents in the category of pediatric cardiac catheterization procedures.

(2) The applicant has performed a minimum of 1,400 procedure equivalents per existing and approved laboratories during the most recent 12-month period preceding the date the application was submitted to the Department.

Section 7. Requirements to acquire a cardiac catheterization service

Sec. 7. Acquiring a cardiac catheterization service and its laboratories means obtaining possession and control by contract, ownership, lease or other comparable arrangement or renewal of a lease for existing angiography x-ray equipment. An applicant proposing to acquire a cardiac catheterization service or renew a lease for equipment shall demonstrate the following as applicable to the proposed project:

(1) An applicant proposing to acquire a cardiac catheterization service shall demonstrate the following:

(a) The proposed project is part of an application to acquire the entire hospital.

(b) An application for the first acquisition of an existing cardiac catheterization service after February 27, 2012 shall not be required to be in compliance with the applicable volume requirements in Section 10. The cardiac catheterization service shall be operating at the applicable volumes set forth in the project delivery requirements in the second 12 months of operation of the service by the applicant and annually thereafter.

(c) For any application proposing to acquire an existing cardiac catheterization service, except the first application approved pursuant to subsection (b), an applicant shall be required to document that the

cardiac catheterization service to be acquired is operating in compliance with the volume requirements set forth in section 10 of these standards applicable to an existing cardiac catheterization service on the date the application is submitted to the Department.

(2) An applicant proposing to renew a lease for existing angiography x-ray equipment shall demonstrate the renewal of the lease is more cost effective than replacing the equipment.

Section 8. Requirements for a hybrid operating room/cardiac catheterization laboratory (OR/CCL)

Sec. 8. A hybrid OR/CCL means an operating room located on a sterile corridor and equipped with an angiography system permitting minimally invasive procedures of the heart and blood vessels with full anesthesia capabilities. An applicant proposing to add one or more hybrid OR/CCLs at an existing cardiac catheterization service shall demonstrate each of the following:

(1) The applicant operates an OHS service which is in full compliance with the current CON Review Standards for OHS Services.

(2) The applicant operates a therapeutic cardiac catheterization program which is in full compliance with section 5(2) of these standards.

(3) If the hybrid OR/CCL(s) represents an increase in the number of cardiac catheterization laboratories at the facility, the applicant is in compliance with Section 6 of these standards.

(4) If the hybrid OR/CCL(s) represents conversion of an existing cardiac catheterization laboratory(s), the applicant is in compliance with the provisions of Section 5, if applicable.

(5) The applicant meets the applicable requirements of the CON Review Standards for Surgical Services.

(6) Each case performed in a hybrid OR/CCL shall be included either in the surgical volume or the therapeutic cardiac catheterization volume of the facility. No case shall be counted more than once.

(7) For each hybrid OR/CCL, a facility shall have 0.5 excluded from its inventory of cardiac catheterization laboratories for the purposes of computing the procedure equivalents per room. A facility will not be limited to the number of hybrid ORCCLs within a single licensed facility.

Section 9. Requirement for Medicaid participation

Sec. 9. An applicant shall provide verification of Medicaid participation at the time the application is submitted to the Department. An applicant that is initiating a new service or is a new provider not currently enrolled in Medicaid shall certify that proof of Medicaid participation will be provided to the Department within six (6) months from the offering of services if a CON is approved.

Section 10. Project delivery requirements and terms of approval for all applicants

Sec. 10. An applicant shall agree that, if approved, the cardiac catheterization service and all existing and approved laboratories shall be delivered in compliance with the following terms of approval:

(1) Compliance with these standards.

(2) Compliance with the following quality assurance standards:

(a) Cardiac catheterization procedures shall be performed in a cardiac catheterization laboratory located within a hospital, and have within, or immediately available to the room, dedicated emergency equipment to manage cardiovascular emergencies.

(b) The service shall be staffed with sufficient medical, nursing, technical and other personnel to permit regular scheduled hours of operation and continuous 24-hour on-call availability.

(c) The medical staff and governing body shall receive and review at least annual reports describing the activities of the cardiac catheterization service including complication rates, morbidity and mortality, success rates and the number of procedures performed.

(d) Each physician credentialed by a hospital to perform adult therapeutic cardiac catheterization procedures shall perform, as the primary operator, a minimum of 50 adult therapeutic cardiac catheterization procedures per year in the second 12 months after being credentialed to and annually thereafter. The annual case load for a physician means adult therapeutic cardiac catheterization procedures performed by that physician in any combination of hospitals.

(e) Each physician credentialed by a hospital to perform pediatric cardiac catheterizations shall perform, as the primary operator, a minimum of 50 pediatric cardiac catheterization procedures per year in the second 12 months after being credentialed and annually thereafter. The annual case load for a physician means pediatric cardiac catheterization procedures performed by that physician in any combination of hospitals.

(f) An adult diagnostic cardiac catheterization service shall have a minimum of two appropriately trained physicians on its active hospital staff. The Department may accept other evidence or shall consider it appropriate training if the staff physicians:

- (i) are trained consistent with the recommendations of the American College of Cardiology;
- (ii) are credentialed by the hospital to perform adult diagnostic cardiac catheterizations; and
- (iii) have each performed a minimum of 100 adult diagnostic cardiac catheterizations in the preceding 12 months.

(g) An adult therapeutic cardiac catheterization service shall have a minimum of two appropriately trained physicians on its active hospital staff. The Department may accept other evidence or shall consider it appropriate training if the staff physicians:

- (i) are trained consistent with the recommendations of the American College of Cardiology;
- (ii) are credentialed by the hospital to perform adult therapeutic cardiac catheterizations; and
- (iii) have each performed a minimum of 50 adult therapeutic cardiac catheterization procedures in the preceding 12 months.

(h) A pediatric cardiac catheterization service shall have an appropriately trained physician on its active hospital staff. The Department may accept other evidence or shall consider it appropriate training if the staff physician:

- (i) is board certified or board eligible in pediatric cardiology by the American Board of Pediatrics;
- (ii) is credentialed by the hospital to perform pediatric cardiac catheterizations; and
- (iii) has trained consistently with the recommendations of the American College of Cardiology.

(i) A pediatric cardiac catheterization service shall maintain a quality assurance plan as outlined in the most current ACCF/SCAI Guidelines.

(j) A cardiac catheterization service shall be directed by an appropriately trained physician. The Department shall consider appropriate training of the director if the physician is board certified in cardiology, cardiovascular radiology or cardiology, adult or pediatric, as applicable. The director of an adult cardiac catheterization service shall have performed at least 100 catheterizations per year during each of the five preceding years. The Department may accept other evidence that the director is appropriately trained.

(k) A cardiac catheterization service shall be operated consistently with the recommendations of the American College of Cardiology.

(l) The applicant hospital providing therapeutic cardiac catheterization services, primary PCI services without on-site OHS service, or elective PCI services without on-site OHS service shall participate with a data registry administered by the Department or its designee that monitors quality and risk adjusted outcomes.

(3) Compliance with the following access to care requirements:

- (a) The service shall accept referrals for cardiac catheterization from all appropriately licensed practitioners.
- (b) The service shall participate in Medicaid at least 12 consecutive months within the first two years of operation and annually thereafter.
- (c) The service shall not deny cardiac catheterization services to any individual based on ability to pay or source of payment.
- (d) The operation of and referral of patients to the cardiac catheterization service shall be in conformance with 1978 PA 368, Sec. 16221, as amended by 1986 PA 319; MCL 333.1621; MSA 14.15 (16221).

(4) Compliance with the following monitoring and reporting requirements:

- (a) The service shall be operating at or above the applicable volumes in the second 12 months of operation of the service, or an additional laboratory, and annually thereafter:
 - (i) 300 procedure equivalents in the category of adult diagnostic cardiac catheterization procedures.
 - (ii) 300 procedure equivalents in the category of adult therapeutic cardiac catheterization procedures.
 - (iii) 600 procedure equivalents in the category of pediatric cardiac catheterization procedures.
 - (iv) 500 procedure equivalents for a hospital in a rural or micropolitan county with one laboratory.
 - (v) 750 procedure equivalents for a hospital in a metropolitan county with one laboratory.
 - (vi) 1,000 procedure equivalents per cardiac catheterization laboratory for two or more laboratories.
 - (vii) 36 adult primary PCI cases for a primary PCI service without on-site OHS service.
 - (viii) 200 adult PCI procedures for an elective PCI service without on-site OHS service.
- (b) The applicant hospital shall participate in a data collection network established and administered by the Department or its designee. Data may include, but is not limited to, annual budget and cost information, operating schedules, patient demographics, morbidity and mortality information, and payor. The Department may verify the data through on-site review of appropriate records.
- (c) The applicant hospital providing therapeutic cardiac catheterization services, primary PCI services without on-site OHS service, or elective PCI services without on-site OHS service shall participate in a data registry administered by the Department or its designee as a means to measure quality and risk adjusted outcomes within cardiac catheterization services. The Department or its designee shall require that the applicant hospital submit summary reports as specified by the Department. The applicant hospital shall provide the required data in a format established by the Department or its designee. The applicant hospital shall be liable for the cost of data submission and on-site reviews in order for the Department to verify and monitor volumes and assure quality. The applicant hospital shall become a member of the data registry specified by the Department upon initiation of the service and continue to participate annually thereafter for the life of that service.
- (d) the applicant hospital shall provide the department with timely notice of the proposed project implementation consistent with applicable statute and promulgated rules.

(5) Compliance with the following primary and elective PCI requirements for hospitals providing therapeutic cardiac catheterization services, primary PCI services without on-site OHS service, or elective PCI services without on-site OHS service, if applicable:

- (a) The requirements set forth in Section 4.
- (b) The hospital shall immediately report to the Department any changes in the interventional cardiologists who perform the primary PCI procedures.
- (c) The hospital shall maintain a 90-minute door-to-balloon time or less in at least 75% of the primary PCI sessions.
- (d) The applicant hospital shall participate in a data registry administered by the Department or its designee as a means to measure quality and risk adjusted outcomes within PCI services by service level. The Department or its designee shall require that the applicant hospital submit all consecutive PCI cases performed within the hospital and meet data submission timeliness requirements and threshold requirements for PCI data submission, accuracy and completeness established by a data registry

administered by the Department or its designee. The applicant hospital shall provide the required data in a format established by the Department or its designee. The applicant hospital shall be liable for the cost of data submission and on-site reviews in order for the Department to verify and monitor volumes and assure quality. The applicant hospital shall become a member of the data registry specified by the Department upon initiation of the service and continue to participate annually thereafter for the life of that service. At a minimum, the applicant hospital shall report the following:

- (i) the number of patients treated with and without STEMI,
- (ii) the proportion of PCI patients with emergency CABG or required emergent transfer,
- (iii) risk and reliability adjusted patient mortality for all PCI patients and a subset of patients with STEMI,
- (iv) PCI appropriate use in elective non-acute MI cases, and
- (v) rates of ad-hoc multi-vessel PCI procedures in the same session.
- (e) The applicant hospital shall maintain a physician point of contact for the data registry.
- (f) Catheterization lab facility requirements and collaborative cardiologists-heart surgeon relationship requirements shall conform to all SCAI/ACC Guidelines for PCI including the SCAI/ACC/AHA Expert Consensus Document. The applicant hospital shall be liable for the cost of demonstrating compliance with these criteria.

(g) The Department shall use these thresholds and metrics in evaluating compliance: performance at a level above the 50th percentile of the statewide performance on each metric listed under subsection (d)(ii) – (v) or another level provided by the data registry designee and accepted by the Department.

(h) The Department shall notify those hospitals who fail to meet any of the minimally acceptable objective quality metric thresholds including those under subsection (d)(ii) – (v). The Department shall require these hospitals to:

- (i) submit a corrective action plan within one month of notification and
- (ii) demonstrate that performance has improved to meet or exceed all applicable objective quality metric thresholds, including those under subsection (d)(ii) – (v), within 12 months of notification.

(i) The applicant hospital initiating elective PCI without on-site OHS services shall have Accreditation for Cardiovascular Excellence (ACE) accreditation or an equivalent body perform an on-site review within 3, 6, and 12 months after implementation. The applicant hospital shall submit the summary reports of the on-site review to the Department.

(6) Nothing in this section prohibits the Department from taking compliance action under MCL 333.22247.

(7) The agreements and assurances required by this section shall be in the form of a certification agreed to by the applicant or its authorized agent.

Section 11. Methodology for computing cardiac catheterization equivalents

Sec. 11. The following shall be used in calculating procedure equivalents and evaluating utilization of a cardiac catheterization service and its laboratories:

Procedure Type	Procedure equivalent	
	Adult	Pediatric
Diagnostic cardiac catheterization/peripheral sessions	1.5	2.7
Therapeutic cardiac catheterization/peripheral sessions	2.7	4.0
Complex percutaneous valvular sessions*	4.0	7.0
* Complex percutaneous valvular sessions includes, but is not limited to, procedures performed percutaneously or with surgical assistance to repair or replace aortic, mitral and pulmonary valves such as transcatheter aortic valvular implantation (Tavi) procedures. These sessions can only be performed at hospitals approved with OHS services.		

Section 12. Documentation of projections

Sec. 12. An applicant required to project volumes shall demonstrate the following as applicable to the proposed project:

(1) The applicant shall specify how the volume projections were developed. Specification of the projections shall include a description of the data source(s) used and assessment of the accuracy of the data. The Department shall determine if the projections are reasonable.

(2) An applicant proposing to initiate a primary PCI service shall demonstrate and certify that the hospital treated or transferred 36 ST segment elevation AMI cases during the most recent 12-month period preceding the date the application was submitted to the Department. Cases may include thrombolytic eligible patients documented through pharmacy records showing the number of doses of thrombolytic therapy ordered and medical records of emergency transfers of AMI patients to an appropriate hospital for a primary PCI procedure.

(3) An applicant proposing to initiate an elective PCI service without on-site OHS services shall demonstrate and certify that the hospital shall treat 200 or more patients with PCI annually using data during the most recent 12-month period preceding the date the application was submitted to the Department as follows:

- (a) All primary PCIs performed at the applicant hospital.
- (b) All inpatients transferred from the applicant hospital to another hospital for PCI.
- (c) 90% of patients who received diagnostic cardiac catheterizations at the applicant hospital and received an elective PCI at another hospital within 30 days of the diagnostic catheterization (based on physician commitments).
- (d) 50% of the elective PCI procedures performed by the committing physician at another hospital within 120 radius miles or 120 minutes travel time from the applicant hospital for patients who did not receive diagnostic cardiac catheterization at the applicant hospital (based on physician commitments).
- (e) An applicant with current OHS services and therapeutic cardiac catheterization services that is proposing to discontinue OHS services and therapeutic cardiac catheterization services and is applying to initiate primary or elective PCI services without on-site OHS services may count all primary and elective PCI at the applicant hospital within the most recent 12-month period preceding the date the application was submitted to the Department.

Section 13. Comparative reviews; Effect on prior CON Review Standards

Sec. 13. Proposed projects reviewed under these standards shall not be subject to comparative review. These CON Review Standards supercede and replace the CON Review Standards for Cardiac Catheterization Services approved by the CON Commission on March 18, 2014 and effective on June 2, 2014.

APPENDIX A

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Rural Michigan counties are as follows:

Alcona	Gogebic	Ogemaw
Alger	Huron	Ontonagon
Antrim	Iosco	Osceola
Arenac	Iron	Oscoda
Baraga	Lake	Otsego
Charlevoix	Luce	Presque Isle
Cheboygan	Mackinac	Roscommon
Clare	Manistee	Sanilac
Crawford	Montmorency	Schoolcraft
Emmet	Newaygo	Tuscola
Gladwin	Oceana	

Micropolitan statistical area Michigan counties are as follows:

Allegan	Hillsdale	Mason
Alpena	Houghton	Mecosta
Benzie	Ionia	Menominee
Branch	Isabella	Missaukee
Chippewa	Kalkaska	St. Joseph
Delta	Keweenaw	Shiawassee
Dickinson	Leelanau	Wexford
Grand Traverse	Lenawee	
Gratiot	Marquette	

Metropolitan statistical area Michigan counties are as follows:

Barry	Jackson	Muskegon
Bay	Kalamazoo	Oakland
Berrien	Kent	Ottawa
Calhoun	Lapeer	Saginaw
Cass	Livingston	St. Clair
Clinton	Macomb	Van Buren
Eaton	Midland	Washtenaw
Genesee	Monroe	Wayne
Ingham	Montcalm	

Source:

75 F.R., p. 37245 (June 28, 2010)
Statistical Policy Office
Office of Information and Regulatory Affairs
United States Office of Management and Budget

APPENDIX B**ICD-9-CM TO ICD-10-CM Code Translation**

ICD-9 Code	Description	ICD-10 Code	Description
426.7	Anomalous Atrioventricular Excitation	I45.6	Pre-Excitation Syndrome
427	Cardiac Dysrhythmias	I47.0-I47.9	Paroxysmal Tachycardia
		I48.0-I48.92	Atrial Fibrillation and Flutter
		I49.01-I49.9	Other Cardiac Arrhythmias
		R00.1	Bradycardia, Unspecified
745.0 through 747.99	Bulbus Cordis Anomalies and Anomalies of Cardiac Septal Closure, Other Congenital Anomalies of Heart, and other Congenital Anomalies of Circulatory System	P29.3	Persistent Fetal Circulation
		Q20.0-Q28.9	Congenital Malformations of the Circulatory System

"ICD-9-CM Code" means the disease codes and nomenclature found in the International Classification of Diseases - 9th Revision - Clinical Modification, prepared by the Commission on Professional and Hospital Activities for the U.S. National Center for Health Statistics.

"ICD-10-CM Code" means the disease codes and nomenclature found in the International Classification of Diseases - 10th Revision - Clinical Modification, National Center for Health Statistics.



Physician Volumes:

Issues Raised During Cardiac Cath Compliance Reviews Part II

Dr. Ryan Madder, MD, FACC
Section Chief, Interventional Cardiology
Medical Director, Cardiac Cath Lab
Frederik Meijer Heart & Vascular Institute
Spectrum Health

Review

Department has been reviewing all Cardiac Cath programs across the State to determine if they are in compliance with ALL of the Project Delivery Requirements in the Standards.

Through this process we have learned how some provisions of the Standards are interpreted and will be enforced.

Believe some provisions in the Project Delivery Requirements need modifications to ensure appropriate and consistent enforcement.

Physician Volume Requirements

- Based on feedback obtained at September meeting recommend making the following changes consistently throughout the physician volume requirement sections:
 - Change all volume requirements to SESSIONS
 - 2 year average for physician level volume requirements
 - Allow physicians unable to perform catheters for 3 months or more to use an annualized volume for determining compliance.
 - Allow facilities to maintain compliance regardless of physician level volumes if maintaining robust quality oversight.
 - If diagnostic and therapeutic catheters are performed in the same session that session can be counted toward both diagnostic and therapeutic catheter volume requirements.

Physician Volume Requirements: Diagnostic (Facility Level)

“Sec. 10(2)(f) An adult diagnostic cardiac catheterization service shall have a minimum of two appropriately trained physicians on its active hospital staff. The Department may accept other evidence or shall consider it appropriate training if the staff physicians:

- (i) are trained consistent with the recommendations of the American College of Cardiology;
- (ii) are credentialed by the hospital to perform adult diagnostic cardiac catheterizations; and
- (iii) have each performed a minimum of **100** adult diagnostic cardiac catheterizations in the **preceding 12 months**”

Physician Volume Requirements: Diagnostic (Facility Level)

(fG) An adult diagnostic cardiac catheterization service shall have a minimum of two appropriately trained physicians on its active hospital staff **MEETING THE FOLLOWING CRITERIA**. ~~The Department may accept other evidence or shall consider it appropriate training if the staff physicians:~~

- (i) are trained consistent with the recommendations of the American College of Cardiology;
- (ii) are credentialed by the hospital to perform adult diagnostic cardiac catheterizations; and
- (iii) have ~~each~~ performed a minimum of 100 adult diagnostic cardiac catheterizations **SESSIONS** in the preceding 12 months. **THE ANNUAL CASE LOAD FOR A PHYSICIAN MEANS A CARDIAC CATHETERIZATION SESSION IN WHICH THAT PHYSICIAN PERFORMED, AS THE PRIMARY OPERATOR, AT LEAST ONE DIAGNOSTIC CARDIAC CATHETERIZATION, IN ANY COMBINATION OF HOSPITALS.**

Physician Volume Requirements: Diagnostic (Physician Level)

****Note - New Subsection****

“10(2)(F) EACH PHYSICIAN CREDENTIALLED BY A HOSPITAL TO PERFORM DIAGNOSTIC LEFT-HEART CATHETERIZATION AND/OR CORONARY ANGIOGRAPHY SHALL PERFORM, AS THE PRIMARY OPERATOR, AN AVERAGE OF AT LEAST 50 DIAGNOSTIC CARDIAC CATHETERIZATION SESSIONS INVOLVING A LEFT-HEART CATHETERIZATION OR CORONARY ANGIOGRAPHY PER YEAR AVERAGED OVER THE MOST RECENT 3 YEARS STARTING IN THE SECOND 12 MONTHS AFTER BEING CREDENTIALLED. THIS THREE YEAR AVERAGE WILL BE EVALUATED ON A ROLLING BASIS ANNUALLY THERAFTER. THE ANNUAL CASE LOAD FOR A PHYSICIAN MEANS A CARDIAC CATHETERIZATION SESSION IN WHICH THAT PHYSICIAN PERFORMED, AS THE PRIMARY OPERATOR, AT LEAST ONE LEFT-HEART CATHETERIZATION OR CORONARY ANGIOGRAPHY, IN ANY COMBINATION OF HOSPITALS. PHYSICIANS FALLING BELOW THIS VOLUME REQUIREMENT MUST BE PLACED ON A FOCUSED PROFESSIONAL PRACTICE EVALUATION (FPPE) PLAN TO ENSURE QUALITY OUTCOMES ARE MAINTAINED. IN THE EVENT A PHYSICIAN IS UNABLE TO PERFORM CARDIAC CATHETERIZATION PROCEDURES ON A TEMPORARY OR PERMANENT BASIS FOR A PERIOD OF 3 MONTHS OR MORE, THE PHYSICIAN'S VOLUME WILL BE ANNUALIZED ON THE 24 MONTH PERIOD PRECEDING THE ABSENCE. WHEN A DIAGNOSTIC CARDIAC CATHETERIZATION SESSION AND A THERAPEUTIC CARDIAC CATHETERIZATION SESSION ARE PERFORMED TOGETHER, DIAGNOSTIC AND THERAPEUTIC SESSIONS ARE COUNTED SEPARATELY FOR PURPOSES OF THIS SUBSECTION.

Physician Volume Requirements: Therapeutic (Facility Level)

(g) An adult therapeutic cardiac catheterization service shall have a minimum of two appropriately trained physicians on its active hospital staff. The Department may accept other evidence or shall consider it appropriate training if the staff physicians:

(i) are trained consistent with the recommendations of the American College of Cardiology;

(ii) are credentialed by the hospital to perform adult therapeutic cardiac catheterizations; and

(iii) have each performed a minimum of 50 adult therapeutic cardiac catheterization procedures in the preceding 12 months.



Physician Volume Requirements: Therapeutic (Facility Level)

(gH) An adult therapeutic cardiac catheterization service shall have a minimum of two ~~appropriately trained~~ physicians on its active hospital staff **MEETING THE FOLLOWING CRITERIA**. ~~The Department may accept other evidence or shall consider it appropriate training if the staff physicians:~~

- (i) are trained consistent with the recommendations of the American College of Cardiology;
- (ii) are credentialed by the hospital to perform adult therapeutic cardiac catheterizations; and
- (iii) have ~~each~~ performed a minimum of 50 adult therapeutic cardiac catheterization procedures **SESSIONS** in the preceding 12 months. **THE ANNUAL CASE LOAD FOR A PHYSICIAN MEANS A CARDIAC CATHETERIZATION SESSION IN WHICH THAT PHYSICIAN PERFORMED, AS THE PRIMARY OPERATOR, AT LEAST ONE THERAPEUTIC CARDIAC CATHETERIZATION, IN ANY COMBINATION OF HOSPITALS.**

Physician Volume Requirements: Therapeutic (Physician Level)

“Sec. 10(2)(d) Each physician credentialed by a hospital to perform adult therapeutic cardiac catheterization procedures shall perform, as the primary operator, a minimum of 50 adult therapeutic cardiac catheterization procedures per year in the second 12 months after being credentialed to and annually thereafter. The annual case load for a physician means adult therapeutic cardiac catheterization procedures performed by that physician in any combination of hospitals.”

Physician Volume Requirements: Therapeutic (Physician Level)

10(2)(d) Each physician credentialed by a hospital to perform adult therapeutic cardiac catheterization procedures shall perform, as the primary operator, a ~~minimum~~ **AVERAGE of AT LEAST 50 adult therapeutic cardiac catheterization procedures SESSIONS per year AVERAGED OVER THE MOST RECENT 2 YEARS STARTING** in the second 12 months after being credentialed. **THIS TWO YEAR AVERAGE WILL BE EVALUATED ON A ROLLING BASIS** ~~to and~~ annually thereafter. The annual case load for a physician means adult therapeutic cardiac catheterization ~~procedures~~ **SESSIONS** performed by that physician in any combination of hospitals. **PHYSICIANS FALLING BELOW THIS VOLUME REQUIREMENT MUST BE PLACED ON A FOCUSED PROFESSIONAL PRACTICE EVALUATION (FPPE) PLAN TO ENSURE QUALITY OUTCOMES ARE MAINTAINED. IN THE EVENT A PHYSICIAN IS UNABLE TO PERFORM CARDIAC CATHETERIZATION PROCEDURES ON A TEMPORARY OR PERMANENT BASIS FOR A PERIOD OF 3 MONTHS OR MORE, THE PHYSICIAN'S VOLUME WILL BE ANNUALIZED ON THE 24 MONTH PERIOD PRECEDING THE ABSENCE. WHEN A DIAGNOSTIC CARDIAC CATHETERIZATION SESSION AND A THERAPEUTIC CARDIAC CATHETERIZATION SESSION ARE PERFORMED TOGETHER, DIAGNOSTIC AND THERAPEUTIC SESSIONS ARE COUNTED SEPARATELY FOR PURPOSES OF THIS SUBSECTION.**

Physician Volume Requirements: Pediatric (Facility Level)

(h) A pediatric cardiac catheterization service shall have an appropriately trained physician on its active hospital staff. The Department may accept other evidence or shall consider it appropriate training if the staff physician:

(i) is board certified or board eligible in pediatric cardiology by the American Board of Pediatrics;

(ii) is credentialed by the hospital to perform pediatric cardiac catheterizations;
and

(iii) has trained consistently with the recommendations of the American College of Cardiology.

Physician Volume Requirements: Pediatric (Facility Level)

(h) A pediatric cardiac catheterization service shall have an appropriately trained AT **LEAST ONE** physician on its active hospital staff **MEETING THE FOLLOWING CRITERIA**. ~~The Department may accept other evidence or shall consider it appropriate training if the staff physician:~~

- (i) is board certified or board eligible in pediatric cardiology by the American Board of Pediatrics;
- (ii) is credentialed by the hospital to perform pediatric cardiac catheterizations; and
- (iii) has trained consistently with the recommendations of the American College of Cardiology.

Physician Volume Requirements: Pediatric (Physician Level)

(e) Each physician credentialed by a hospital to perform pediatric cardiac catheterizations shall perform, as the primary operator, a minimum of 50 pediatric cardiac catheterization procedures per year in the second 12 months after being credentialed and annually thereafter. The annual case load for a physician means pediatric cardiac catheterization procedures performed by that physician in any combination of hospitals.

Physician Volume Requirements: Pediatric (Physician Level)

(e) Each physician credentialed by a hospital to perform pediatric cardiac catheterizations shall perform, as the primary operator, a ~~minimum~~ **AVERAGE of AT LEAST 50** pediatric cardiac catheterization procedures **SESSIONS** per year **AVERAGED OVER THE MOST RECENT 2 YEARS STARTING** in the second 12 months after being credentialed. **THIS TWO YEAR AVERAGE WILL BE EVALUATED ON A ROLLING BASIS** ~~to and~~ annually thereafter. The annual case load for a physician means pediatric cardiac catheterization procedures **SESSIONS** performed by that physician in any combination of hospitals. **PHYSICIANS FALLING BELOW THIS VOLUME REQUIREMENT MUST BE PLACED ON A FOCUSED PROFESSIONAL PRACTICE EVALUATION (FPPE) PLAN TO ENSURE QUALITY OUTCOMES ARE MAINTAINED. IN THE EVENT A PHYSICIAN IS UNABLE TO PERFORM CARDIAC CATHETERIZATION PROCEDURES ON A TEMPORARY OR PERMANENT BASIS FOR A PERIOD OF 3 MONTHS OR MORE, THE PHYSICIAN'S VOLUME WILL BE ANNUALIZED ON THE 24 MONTH PERIOD PRECEDING THE ABSENCE.**