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The changes in this document are effective February 1, 2022.

Changes to Existing Definitions

We have made a significant change to the definition to the Iliac Aneurysm field for EVAR and Open AAA under Procedure Details. We have also made a significant change to Status of Procedure for all VS and carotid procedures. Please review the definition in the data dictionary.

Revisions to Existing Definitions

The following list contains the data fields where a revision to the definition was made and the data dictionary where the definition is located.

Data Dictionary	Data Field
Discharge	Discharge Status
Discharge	Prior PVI Procedures
Discharge	Prior PVI Procedures>Artery Location
Discharge	Prior Vascular Surgery Procedures
Discharge	Prior Vascular Surgery Procedures>Insertion Point #2
Discharge	Prior Vascular Surgery Procedures>Endarterectomy Location
Discharge	Discharge Creatinine
Discharge	Discharge Hemoglobin
VS	Infrarenal Neck Diameter
VS	Pre Procedure Creatinine
VS	Pre Procedure Hemoglobin
VS	Albumin
VS	Indications>Rest Pain
VS	Indications>Acute Limb Ischemia
VS	Indications>Facilitation of Procedure
VS	Indications>Peripheral Aneurysm Repair
VS	Open Bypass>Graft Origin
VS	Open Bypass>Graft Insertion
VS	Open Bypass>Vein Graft
VS	Open Bypass>Prosthetic Graft
VS	OAAA>Distal Anastomosis
VS	EVAR>Infrarenal Neck Diameter
VS	EVAR>Infrarenal Neck Length
VS	EVAR>Graft Body Diameter
VS	EVAR>RT and LT Distal Seal Zone Diameter
VS	EVAR>Additional Graft Components
VS	EVAR>Hypogastric Intentionally Covered
VS	EVAR/OAAA>Timeframe: Symptoms to incision
VS	All VS Procedures>Antibiotic Pre Procedure
VS	All VS Procedures>Skin Preparation
VS	All VS Procedures>Glucose (Peak)
VS	All VS Procedures>Nadir body temperature

Data Dictionary	Data Field
VS	All VS Procedures>Peak Intra Procedure ACT
VS	Definition of Locations
VS	Locations>Bypass Graft
VS	Definition of Vascular Access
VS	ODP>Vascular Access Complications
VS	Outcomes Post Procedure>Vascular Access Complications
VS	Outcomes Post Procedure>Amputation
CEA	Syncope
CEA	Antibiotics Pre Procedure
CEA	Skin Preparation
CEA	Cranial Nerve Injury
CEA	Return to OR
CAS	Syncope
CAS	Embolic Protection Attempted
CAS	Predilation Prior to EPD Deployment
CAS	EPD Successfully Deployed
CAS	Final Minimum Luminal Diameter
CAS	Vascular Access Complications
Follow-up	Introduction to Follow-up Outcomes
Follow-up	Contact Date
VS Follow-up	Wound Complication
CEA Follow-up	Wound Complication
VS Medications	Medications are listed in alphabetical order
VS Medications	Data Field Definitions page

COVID-19

Pre-procedure and Post-procedure COVID-19 fields are archived.

Aneurysm anatomy

The option of Both is added to aneurysm anatomy for EVAR and OAAA procedures.

Data Abstraction Instructions:

Enter the aneurysm anatomy as described in the pre-imaging or surgical dictation.

Selections:

- Fusiform
- Saccular
- Both
- Not documented

Supporting Definitions:

Both = the aneurysm anatomy is documented as a bi-lobed aneurysm with one lobe having fusiform anatomy and one lobe having saccular anatomy.

IMA at completion

The option of Patent is added to IMA at completion for OAAA procedures.

Data Abstraction Instructions:

Indicate the status of the IMA at the end of the procedure.

Selections:

- Occluded
- Ligated
- Re-implanted
- Patent
- Graft Not Utilized
- Not documented

Supporting Definitions:

Occluded = The IMA may be occluded by thrombus before the start of the procedure (dictated no flow/not visualized on pre-procedure imaging).

Ligated = The IMA may be sutured/ligated during the procedure due to back-bleeding from the artery.

Re-implanted = If the IMA appears to be a major source of flow to the bowels, it may be re-implanted to prevent bowel ischemia.

Patent = The IMA is open to blood flow. If the IMA was re-implanted and open to blood flow, enter re-implanted.

Graft not utilized = The graft was not implanted. Graft not utilized is not a substitution for “not documented.”

Not documented = The status of the IMA at the end of the procedure is not documented.

EVAR Graft Type – Low profile will be removed from the list. Low profile is a type of endograft and not the name of an endograft. Low profile was entered for 3/9042 EVAR procedures as of 8.20.2021.

Closure for Groin Access – EVAR

The option of other VCD is added to percutaneous groin closure for EVAR.

Data Abstraction Instructions:

Enter the closure used for groin access.

Selections:

- percutaneous

- manual
- perclose
- angioseal
- mynx
- starclose
- Exoseal
- compression device
- other VCD
- open
 - suture
 - absorbable
 - permanent
 - Not documented
 - staples
 - skin glue
 - other

Percutaneous = enter the closure used for percutaneous groin access (a small incision is made in the skin, and the micropuncture needle is inserted into the femoral artery).

Other VCD = Enter other VCD if the vascular closure device (VCD) used to close the percutaneous groin access is not on the list.

Open = enter the closure used for open groin access (surgical cut-down). Include all layers of closure - muscle, subcutaneous, and skin.

Vascular Closure Type – CAS

Radial compression band is added as an option for CAS under Procedure Indications and Anatomic Variables.

Data Abstraction Instructions:

Enter the arterial closure methods used regardless of whether they provided hemostasis. Select every type of vascular closure used per access if more than one closure type was used. Each type will only be counted once. E.g., two access sites, two perclose devices; select perclose box.

Selections:

- Manual
- Perclose
- Angioseal
- Mynx
- Starclose
- Exoseal
- Surgical
- Celt
- Radial compression band

Manual = no device or a mechanical type was used, e.g., manual pressure was held by the staff pulling the sheath.

Indications – Lower Extremity Revascularization

The Indication of Popliteal Artery Entrapment Syndrome is added to Indications for Lower Extremity Revascularization. PAES will be located under the Indication of Trauma.

The Indication of Acute Limb Ischemia (ALI) includes acute-on-chronic limb ischemia for Open Thrombectomy procedures.

Data Abstraction Instructions:

Indicate if the procedure was performed for popliteal artery entrapment syndrome (PAES). An anatomical anomaly causes PAES. The condition can also develop over time, as exercise and training lead to an enlarged calf muscle that compresses the popliteal artery.

Blood Pressure

Pre-procedure Blood Pressure

These fields are on the Discharge form under Patient History before Ambulation Pre-procedure.

Data Abstraction Instructions:

Enter the Systolic blood pressure (SBP) and Diastolic blood pressure (DBP) documented on the H&P for the current procedure. The blood pressure recorded on the H&P must be within 45 days of the date of admission. If the H&P is >45 days from the date of admission, or the blood pressure is not documented on the H&P, enter the first blood pressure taken at hospital admission. The SBP has a minimum value of 60 and a maximum value of 300. The DBP has a minimum value of 40 and a maximum value of 150.

Selections:

Pre-procedure SBP

Type the systolic blood pressure in the text box

Pre-procedure DBP

Type the diastolic blood pressure in the text box

Discharge Blood Pressure

The Discharge blood pressure fields are on the Discharge form and located after the Michigan OPEN field.

Data Abstraction Instructions:

Enter the Systolic blood pressure (SBP) and Diastolic blood pressure (DBP) documented on the discharge summary. If the blood pressure is not recorded on the discharge summary, enter the last documented blood pressure before discharge from the hospital. The SBP has a minimum

value of 60 and a maximum value of 300. The DBP has a minimum value of 40 and a maximum value of 150.

Selections:

Discharge SBP

Type the systolic blood pressure in the text box

Discharge DBP

Type the diastolic blood pressure in the text box

Follow-up Blood Pressure

These fields are located on the follow-up form between the Readmission to Hospital and Smoking fields for VS follow-ups. These fields will be located on the follow-up form between Carotid Duplex and Smoking fields for CAS and CEA follow-ups.

Data Abstraction Instructions:

Enter the Systolic blood pressure (SBP) and Diastolic blood pressure (DBP) documented at the time of follow-up. If the patient is in the hospital >30 days, enter the first blood pressure after the patient is discharged from the hospital for the 30-Day follow-up blood pressure. The SBP has a minimum value of 60 and a maximum value of 300. The DBP has a minimum value of 40 and a maximum value of 150.

Selections:

- Yes
 - Type the systolic blood pressure in the text box
 - Type the diastolic blood pressure in the text box
- Not documented

Medications

Medications Added to Website

Calcium Channel Blockers and Thiazides are added to Home Meds prior to admission and Meds at DC. Calcium Channel Blockers are located after ARBs. Thiazides are located between Calcium Channel Blockers and Statins. Examples of Calcium Channel Blockers and Thiazide medications are in the Medication Dictionary.

Dose (mg)

Enter the total dosage documented for the medications below. For example, if apixaban 2.5 mg BID is documented, enter 5 mg. This field will accept decimals. This field will display when Given is entered for the following medications:

- Apixaban (Eliquis)
- Dabigatran (Pradaxa)
- Edoxaban (Savaysa)

- Rivaroxaban (Xarelto)

Smoking Cessation

Pre Procedure Smoking Cessation

1. A Patient Refused field is added for each smoking cessation intervention.
2. A Local counseling service, Michigan Quitline, and Other counseling service fields will display when Referral to smoking counseling services is checked.

Data Abstraction Instructions:

Indicate if the patient received physician-delivered advice, a prescription for nicotine replacement, and/or a referral for smoking cessation services before admission to the hospital. These interventions would be implemented to prepare the patient for the current procedure. Select all that apply.

Selections:

- Yes
 - Physician delivered advice
 - Patient refused
 - Nicotine replacement therapy (NRT)
 - Patient refused
 - Referral to smoking counseling services
 - Patient refused
 - Local counseling service
 - Michigan Quitline
 - Other counseling service
- No

Supporting Definitions:

Yes = Enter Yes for Pre Procedure Smoking Cessation if Yes was entered for Current Smoker under Patient History ' Comorbidity, and one of the three steps was implemented before admission to the hospital.

Physician delivered advice = A surgeon, advanced practice personnel (PA, NP), or resident has a conversation with the patient and recommends the patient stop smoking. A recommendation to stop smoking offered by a nurse, respiratory therapist, or student does not count as physician-delivered advice.

If there is documentation that the provider recommended smoking cessation and the patient refused, enter Physician delivered advice AND Patient refused. There must be adequate documentation to support this claim.

Nicotine replacement therapy (NRT) = The provider ordered NRT before admission to the hospital. NRT may include a nicotine patch, gum, lozenge, or other pharmacologic assistance (Varenicline or Bupropion).

If a patient refuses NRT, and there is provider documentation that NRT was offered and documentation that the patient refused, enter NRT AND Patient refused.

Referral to smoking counseling services = The provider documents they referred the patient to a smoking counseling service. Smoking counseling services may include a smoking counseling service, a smoking cessation program, a smoking cessation class, the Michigan Tobacco Quitline, or a national smoking cessation service. The provider must recommend a smoking counseling service to the patient. The standard message to stop smoking on the AVS or discharge summary template is not sufficient.

If a physician, mid-level provider, or resident does an assessment and then refers the patient to a respiratory therapist or a dedicated smoking cessation nurse to provide smoking cessation education, you can choose Referral to smoking counseling services.

If there is documentation that the provider recommended smoking counseling services and the patient refused, enter Referral to smoking counseling services, AND Patient refused. There must be adequate documentation to support this claim.

Patient Refused = The provider documented that the patient refused the corresponding intervention.

Local counseling service = The provider refers the patient to the hospital's smoking counseling service or a community-based smoking counseling service. Enter Referral to smoking counseling services AND Local counseling service.

Michigan Quitline = The provider refers the patient to the Michigan Tobacco Quitline. Enter Referral to smoking counseling services AND Referral to Michigan Quitline.

Other counseling service = The provider refers the patient to a Federal or National smoking cessation service. Enter Referral to smoking counseling services AND Other counseling service.

No = Enter No for Smoking Cessation at Discharge if No was entered for Ever Smoked or current Smoker under Patient History / Comorbidity. Enter No if the patient is a current smoker; however, none of the three steps were implemented before admission to the hospital.

Smoking Cessation Counseling (on the discharge form)

Data Abstraction Instructions:

Indicate if the patient received physician-delivered advice, a prescription for nicotine replacement, and/or a referral for smoking cessation services submitted on the patient's behalf. Select all that apply.

Selections:

- Yes
 - Physician delivered advice
 - Patient refused
 - Nicotine replacement therapy (NRT)
 - Patient refused
 - Referral to smoking counseling services
 - Patient refused
 - Local counseling service
 - Michigan Quitline
 - Other counseling service
- No

Yes = Enter Yes for Smoking Cessation Counseling if Yes was entered for Current Smoker under Patient History / Comorbidity, and at least one of the three steps were implemented during the hospitalization or at discharge.

Physician delivered advice = A surgeon, advanced practice personnel (PA, NP), or resident has a conversation with the patient and recommends the patient stop smoking. A recommendation to stop smoking offered by a nurse, respiratory therapist, or student does not count as physician-delivered advice.

If there is documentation that the provider recommended smoking cessation and the patient refused, enter Physician delivered advice AND Patient refused. There must be adequate documentation to support this claim.

Nicotine replacement therapy (NRT) = The provider ordered or continued NRT at discharge. NRT may include a nicotine patch, gum, lozenge, or other pharmacologic assistance (Varenicline or Bupropion).

If a patient refuses NRT, and there is provider documentation that NRT was offered and documentation that the patient refused, enter NRT AND Patient refused.

Referral to smoking counseling services = The provider documents during the hospital admission or at discharge that they referred the patient to a smoking counseling service. Smoking counseling services may include a hospital specialist, a smoking cessation class, the Michigan Tobacco Quitline, or a national smoking cessation service. The provider must recommend a smoking counseling service to the patient. The standard message to stop smoking on the AVS or discharge summary template is not sufficient.

If a physician, mid-level provider, or resident does an assessment and then puts in a referral to a respiratory therapist or a dedicated smoking cessation nurse to provide smoking cessation education, you can choose Referral to smoking counseling services.

If there is documentation that the provider recommended smoking counseling services and the patient refused, enter Referral to smoking counseling services, AND Patient refused. There must be adequate documentation to support this claim.

If the referral to smoking counseling services was submitted to the Michigan Tobacco Quitline, enter Referral to smoking counseling services AND Michigan Quitline.

Patient Refused = The provider documented that the patient refused the corresponding intervention.

Local counseling service = The provider refers the patient to the hospital's smoking counseling service or a community-based smoking counseling service. Enter Referral to smoking counseling services AND Local counseling service.

Michigan Quitline = The provider refers the patient to the Michigan Tobacco Quitline. Enter Referral to smoking counseling services AND Referral to Michigan Quitline.

Other counseling service = The provider refers the patient to a Federal or National smoking cessation service. Enter Referral to smoking counseling services AND Other counseling service.

No = Enter No for Smoking Cessation at Discharge if No was entered for Ever Smoked or current Smoker under Patient History / Comorbidity. Enter No if the patient is a current smoker; however, none of the three steps were implemented during the hospitalization or at discharge.