



## Vascular Surgery Report Dictionary

Updated with Q2 2023 report release.

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## All Vascular Surgeries

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The demographic, patient history, and medication data listed below exists at the discharge level, not at the procedure level. In each of these, consider only discharges in which there was at least one Vascular Surgery procedure.

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### Demographics

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#### Discharges

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The total number of discharges that contain a vascular surgery procedure. The numerator and denominator are the same.

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#### Average Age (mean, stdev)

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Calculates the average (mean) age of patients as of the admission date. Compare the birthdate of each discharge with the admission date to compute the age of the patient at admission.

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#### Male Gender

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Numerator: The number of discharges with a VS procedure where the patient is male.

Denominator: The total number of discharges with a VS procedure.

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#### Female Gender

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Numerator: The number of discharges with a VS procedure where the patient is female.

Denominator: The total number of discharges with a VS procedure.

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#### Race

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Numerator: The number of discharges with a VS procedure of X race.

Denominator: The total number of discharges with a VS procedure.

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#### Preadmission Living Location

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Numerator: The number of discharges with a VS procedure with X Preadmission Living Location.

Denominator: The total number of discharges with a VS procedure.

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#### Discharge Status

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Numerator: The number of discharges with a VS procedure with X Discharge Status.

Denominator: The total number of discharges with a VS procedure.

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#### Death

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##### Data Abstraction Instructions:

Numerator: The number of discharges with a VS procedure where death is the discharge status.

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Denominator: The total number of discharges with a VS procedure

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## Patient History

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### Ever Smoked

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Numerator: The number of discharges with an elective VS procedure where the patient smoked at any time during their life.

Denominator: The total number of discharges with an elective VS procedure.

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### Current Smoker

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Numerator: The number of discharges with an elective VS procedure where the patient smoked cigarettes, cigars, pipe, or chewed tobacco within one month prior to arrival to the hospital.

Denominator: The total number of discharges with an elective VS procedure.

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### Smoking Cessation

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The Smoking Cessation section combines Pre-procedure Smoking Cessation and Smoking Cessation at Discharge.

Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and at least 2 of 3 smoking cessation interventions (Physician-delivered advice, Nicotine replacement therapy, Referral to smoking counseling services) were implemented before the hospital admission date, during the hospitalization or at the time of discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### Physician Delivered Advice

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### Pt Refused Physician Delivered Advice

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused to quit smoking prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking prior to the date of admission, during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### Nicotine Replacement Therapy (NRT)

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Pt Refused Nicotine Replacement Therapy (NRT)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused NRT prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT prior to the date of admission, during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Referral to Smoking Counseling Services**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Pt Refused Referral to Smoking Counseling Services**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused the referral to a smoking counseling service prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission, during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Pre-Procedure Smoking Cessation**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and at least 2 of 3 smoking cessation interventions (Physician-delivered advice, Nicotine replacement therapy, Referral to smoking counseling services) were implemented prior to the date of admission.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Physician Delivered Advice (Pre-Procedure)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking prior to the date of admission.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Pt Refused Physician Delivered Advice (Pre-Procedure)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused to quit smoking prior to the date of admission.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking prior to the date of admission.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Nicotine Replacement Therapy (NRT) (Pre-Procedure)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco and the provider recommended NRT prior to the date of admission.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Nicotine Replacement Therapy (NRT) (Pre-Procedure)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco and the patient refused NRT prior to the date of admission.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT prior to the date of admission.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Referral to Smoking Counseling Services (Pre-Procedure)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Referral to Smoking Counseling Service (Pre-Procedure)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco and the patient refused the referral to a smoking counseling service prior to the date of admission.

Denominator: The total number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Smoking Cessation at DC**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and at least 2 of 3 smoking cessation interventions (Physician-delivered advice, Nicotine replacement therapy, Referral to smoking counseling services) were implemented during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Physician Delivered Advice (Discharge)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Physician Delivered Advice (Discharge)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused to quit smoking during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Nicotine Replacement Therapy (NRT) (Discharge)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Nicotine Replacement Therapy (NRT) (Discharge)**

---

Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused NRT during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Referral to Smoking Counseling Services (Discharge)**

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Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Referral to Smoking Counseling Services (Discharge)**

---

Numerator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused the referral to a smoking counseling service during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Ever Smoked (VS and Carotid)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient smoked any time in their life.

Denominator: The total number of discharges with an elective VS or carotid procedure.

Exclusion from numerator and denominator: Death during procedure, death post-procedure, or death at discharge.

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### **Current Smoker (VS and Carotid)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient smoked cigarettes, cigars, pipe, or chewed tobacco within one month prior to arrival to the hospital.

Denominator: The total number of discharges with an elective VS or carotid procedure.

Exclusion from numerator and denominator: Death during procedure, death post-procedure, or death at discharge.

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## **Smoking Cessation (VS and Carotid)**

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The Smoking Cessation section combines Pre-procedure Smoking Cessation and Smoking Cessation at Discharge.

**Numerator:** The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and at least 2 of 3 smoking cessation interventions (Physician-delivered advice, Nicotine replacement therapy, Referral to smoking counseling services) were implemented before the hospital admission date, during the hospitalization or at the time of discharge.

**Denominator:** The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

**Exclusion:** Death during procedure, death post-procedure, or death at discharge.

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## **Physician Delivered Advice (VS and Carotid)**

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**Numerator:** The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking prior to the date of admission, during the hospitalization or at discharge.

**Denominator:** The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

**Exclusion:** Death during procedure, death post-procedure, or death at discharge.

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## **Pt Refused Physician Delivered Advice (VS and carotid)**

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**Numerator:** The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused to quit smoking prior to the date of admission, during the hospitalization or at discharge.

**Denominator:** The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking prior to the date of admission, during the hospitalization or at discharge.

**Exclusion:** Death during procedure, death post-procedure, or death at discharge.

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## **Nicotine Replacement Therapy (NRT) (VS and Carotid)**

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**Numerator:** The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT prior to the date of admission, during the hospitalization or at discharge.

**Denominator:** The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

**Exclusion:** Death during procedure, death post-procedure, or death at discharge.

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## **Pt Refused Nicotine Replacement Therapy (NRT)(VS and carotid)**

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**Numerator:** The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused NRT prior to the date of admission, during the hospitalization or at discharge.

**Denominator:** The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT prior to the date of admission, during the hospitalization or at discharge.

**Exclusion:** Death during procedure, death post-procedure, or death at discharge.

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## **Referral to Smoking Counseling Services (VS and Carotid)**

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**Numerator:** The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

---

### **Pt Refused Referral to Smoking Counseling Services (VS and Carotid)**

---

Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused the referral to a smoking counseling service prior to the date of admission, during the hospitalization or at discharge.

Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission, during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pre-Procedure Smoking Cessation (VS and Carotid)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and at least 2 of 3 smoking cessation interventions (Physician-delivered advice, Nicotine replacement therapy, Referral to smoking counseling services) were implemented prior to the date of admission.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Physician Delivered Advice (VS and Carotid, Pre-Procedure)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco and the provider recommended the patient quit smoking prior to the date of admission.

Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Physician Delivered Advice (VS and Carotid, Pre-Procedure)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco the patient refused to quit smoking prior to the date of admission.

Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking prior to the date of admission.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Nicotine Replacement Therapy (NRT) (VS and Carotid, Pre-Procedure)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT prior to the date of admission.

Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Nicotine Replacement Therapy (NRT) (VS and Carotid, Pre-Procedure)**

---

Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused NRT prior to the date of admission.



Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT prior to the date of admission.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Referral to Smoking Counseling Service (VS and Carotid, Pre-Procedure)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission.

Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Referral to Smoking Counseling Services (VS and Carotid, Pre-Procedure)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, chews tobacco and the patient refused the referral to a smoking counseling service prior to the date of admission.

Denominator: The total number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service prior to the date of admission.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Smoking Cessation at DC (VS and Carotid)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and at least 2 of 3 smoking cessation interventions (Physician-delivered advice, Nicotine replacement therapy, Referral to smoking counseling services) were implemented during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Physician Delivered Advice (VS and Carotid, Discharge)**

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Pt Refused Physician Delivered Advice (VS and Carotid, Discharge)**

---

Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused to quit smoking during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended the patient quit smoking during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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### **Nicotine Replacement Therapy (NRT) (VS and Carotid, Discharge)**

---

Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Pt Refused Nicotine Replacement Therapy (NRT) (VS and Carotid, Discharge)**

---

Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the patient refused NRT during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider recommended NRT during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Referral to Smoking Counseling Services (VS and Carotid, Discharge)**

---

Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Pt Refused Referral to Smoking Counseling Services (VS and Carotid, Discharge)**

---

Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco the patient refused the referral to a smoking counseling service during the hospitalization or at discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and the provider referred the patient to a smoking counseling service during the hospitalization or at discharge.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

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## **Hypertension**

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Numerator: The number of discharges with a VS procedure where the patient has a history of hypertension.

Denominator: The total number of discharges with a VS procedure.

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## **Diabetes Mellitus**

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Numerator: The number of discharges with a VS procedure where the patient has a history of any type of diabetes.

Denominator: The total number of discharges with a VS procedure.

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## **Coronary Artery Disease (CAD)**

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Numerator: The number of discharges with a VS procedure where the patient has a history of CAD.

Denominator: The total number of discharges with a VS procedure.

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## **Exercise Counseling at DC (PAD)**

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Numerator: The number of discharges containing an open bypass procedure where the patient received exercise counseling or education.

Denominator: The number of discharges containing an open bypass procedure.

Exclusions:

- Death in OR or post procedure

- Discharges with Wheelchair or Bedridden entered for Ambulation pre procedure.

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## Medications (admission, discharge)

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### Aspirin (adm)

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Numerator: The number of discharges with an Open AAA, EVAR, or open bypass procedure where the patient is taking ASA within 30 days of hospital admission.

Denominator: The total number of discharges with an Open AAA, EVAR, or open bypass procedure.

Exclusions: A contraindication to ASA.

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### Aspirin (dis)

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Numerator: The number of discharges with an Open AAA, EVAR, or open bypass procedure where ASA is ordered or continued at discharge.

Denominator: The total number of discharges with an Open AAA, EVAR, or open bypass procedure.

Exclusions: A contraindication to ASA.

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### Beta Blockers (adm)

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Numerator: The number of discharges with an Open AAA, EVAR, or open bypass procedure where the patient is taking a beta blocker within 30 days of hospital admission.

Denominator: The total number of discharges with an Open AAA, EVAR, or open bypass procedure.

Exclusion: A contraindication to beta blockers.

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### Beta Blockers (dis)

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Numerator: The number of discharges with an Open AAA, EVAR, or open bypass procedure where a beta blocker is ordered or continued at discharge.

Denominator: The total number of discharges with an Open AAA, EVAR, or open bypass procedure.

Exclusions: A contraindication to beta blockers.

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### Statin (adm)

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Numerator: The number of discharges with an OAAA, EVAR, or Open bypass procedure where the patient is taking a statin within 30 days of hospital admission.

Denominator: The total number of discharges with an OAAA, EVAR, or Open bypass procedure.

Exclusion: A contraindication to statins.

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### Statin (dis)

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Numerator: The number of discharges with an OAAA, EVAR, or open bypass procedure where a statin is ordered or continued at discharge.

Denominator: The total number of discharges with an OAAA, EVAR, or open bypass procedure.

Exclusions: A contraindication to statins.

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## Opioids

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### Opioids @ Admission (VS)

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Numerator: The number of discharges with X procedure where the patient is taking an opioid within 30 days of hospital admission.

Denominator: The total number of X procedure.

This section is broken out by specific procedure type:

- EVAR
- Open AAA
- Bypass
- Open Thrombectomy

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### Opioids @ Discharge (VS)

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Numerator: The number of discharges containing X procedure where an opioid is prescribed or continued at discharge.

Denominator: The total number of X procedure.

This section is broken out by specific procedure type:

- EVAR
- Open AAA
- Bypass
- Open Thrombectomy

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### New Opioid @ Discharge (VS)

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Numerator: The number of discharges with X procedure where the patient was not taking an opioid at admission, but an opioid was prescribed at discharge.

Denominator: The total number of X procedure.

This section is broken out by specific procedure type:

- EVAR
- Open AAA
- Bypass
- Open Thrombectomy

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## Procedural Information

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The procedural information below is reported out at the procedure level, not the discharge level for each individual procedure.

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### Pre Imaging Studies (EVAR)

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#### Procedures EVAR

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Numerator: The number of EVAR procedures. Denominator: The number of VS procedures.

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#### CTA (abnormal / performed)

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Numerator: The number of EVAR procedures that had an abnormal Computerized Tomographic Angiography (CTA) pre procedure.

Denominator: The total number of EVAR procedures where a CTA was performed pre procedure.

Note: Pre procedure = the imaging study was performed within 6 months prior to the procedure.

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#### MRI/MRA (abnormal / performed)

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Numerator: The number of EVAR procedures that had an abnormal MRI/MRA pre procedure.

Denominator: The total number of EVAR procedures where a MRI/MRA was performed pre procedure.

Note: Pre procedure = the imaging study was performed within 6 months prior to the procedure.

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#### Cardiac Stress Test

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Numerator: The number of EVAR procedures that had cardiac stress test pre procedure.

Denominator: The total number of EVAR procedures.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

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#### Abnormal

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Numerator: The number of EVAR procedures that had an abnormal Cardiac Stress Test pre procedure.

Denominator: The total number of EVAR procedures where a Cardiac Stress Test was performed pre procedure.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

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#### EKG (abnormal / performed)

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Numerator: The number of EVAR procedures that had an abnormal EKG pre procedure.

Denominator: The total number of EVAR procedures where an EKG was performed pre procedure.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

---

#### Prior CABG

---

Numerator: The number of discharges with an EVAR procedure where a CABG was performed within 6 months prior to the EVAR.

---

Denominator: The total number of EVAR procedures.

---

## **Prior PCI**

---

Numerator: The number of discharges with an EVAR procedure where a PCI was performed within 6 months prior to the EVAR.

Denominator: The total number of EVAR procedures.

---

## **Indications (EVAR)**

---

### **Procedures EVAR**

---

Numerator: The number of EVAR procedures.

Denominator: The total number of VS procedures.

---

### **Asymptomatic**

---

Numerator: The number of EVAR procedures where the patient was Asymptomatic for AAA.

Denominator: The total number of EVAR procedures.

Note: There can be multiple indications per procedure.

---

### **Abdominal/Back Pain**

---

Numerator: The number of EVAR procedures where the patient presented with Abdominal/Back Pain.

Denominator: The total number of EVAR procedures.

Note: there can be multiple indications per procedure.

---

### **Ruptured AAA**

---

Numerator: The number of EVAR procedures with a Ruptured AAA.

Denominator: The total number of EVAR procedures.

---

## **Procedure Details (EVAR)**

---

### **Procedures EVAR**

---

Numerator: The number of EVAR procedures.

Denominator: The total number of VS procedures.

---

### **Maximum AAA Diameter (mean, stdev)**

---

The average (mean) and standard deviation of Maximum AAA Diameter for EVAR procedures.

Exclusions:

- EVAR procedures performed for the indication of iliac aneurysm repair only.
  - EVAR procedures where a Maximum AAA Diameter value is not entered.
- 

### **Graft Body Diameter (mean, stdev)**

---

The average (mean) and standard deviation of Graft Body Diameter for EVAR procedures.

Exclusion: EVAR procedures where a value for Graft Body Diameter is not entered.

---

## Graft Type

---

Numerator: The number of EVAR procedures that had X graft type implanted.

Denominator: The total number of EVAR procedures.

---

## Graft Not Utilized (type)

---

Numerator: The number of EVAR procedures where a graft was not implanted.

Denominator: The total number of EVAR procedures.

---

## Graft Configuration

---

Numerator: The number of EVAR procedures with X Graft Configuration.

Denominator: The total number of EVAR procedures.

---

## Endoleak at Completion

---

Numerator: The number of EVAR procedures where there was an endoleak at completion.

Denominator: The total number of EVAR procedures.

---

## Endoleak Type

---

Numerator: The number of X Endoleak Type.

Denominator: The total number of EVAR procedures where there was an Endoleak at Completion.

---

## Fluoro Time

---

Average and standard deviation calculations of fluoroscopy time reported in minutes for all EVAR procedures.

Exclusions:

- EVAR performed for Ruptured AAA repair
  - Fenestrated EVAR procedure
- 

## Fluoro Time (Fenestrated Graft)

---

Average and standard deviation calculations of fluoroscopy time reported in minutes for all EVAR procedures where a fenestrated graft was implanted.

---

## Fluoro Time (Ruptured AAA)

---

Average and standard deviation calculations of fluoroscopy time reported in minutes for all EVAR procedures performed for ruptured AAA repair.

---

## Kerma Area Product (Gy.cm2)

---

Average and standard deviation calculations of Kerma Area Product reported in Gy.cm2 for all EVAR procedures.

Exclusions:

- EVAR performed for ruptured AAA repair
- Fenestrated EVAR procedure

---

## Kerma Area Product Fenestrated Graft (Gy.cm2)

---

Average and standard deviation calculations of Kerma Area Product reported in Gy.cm2 for all EVAR procedures where a fenestrated graft was implanted.

---

## Kerma Area Product Ruptured AAA (Gy.cm2)

---

Average and standard deviation calculations of Kerma Area Product reported in Gy.cm2 for all EVAR procedures performed for ruptured AAA repair.

---

## Air kerma (Gy)

---

Average and standard deviation calculations of Air Kerma (AK; Cumulative Air Kerma) reported in Gy for all EVAR procedures.

Exclusions:

- EVAR performed for ruptured AAA repair
- Fenestrated EVAR procedure

---

## Air kerma Fenestrated Graft (Gy)

---

Average and standard deviation calculations of Air Kerma (AK; Cumulative Air Kerma) reported in Gy for all EVAR procedures where a fenestrated graft was implanted.

---

## Air kerma Ruptured AAA (Gy)

---

Average and standard deviation calculations of Air Kerma (AK; Cumulative Air Kerma) reported in Gy for all EVAR procedures performed for ruptured AAA repair.

---

## Conversion to Open

---

Numerator: The number of EVAR procedures where a Conversion to Open occurred.

Denominator: The total number of EVAR procedures.

---

## Reason for Conversion to Open

---

Numerator: The number of X reason for Conversion to Open.

Denominator: The total number of EVAR procedures where a Conversion to Open occurred.

---

## Pre Imaging Studies (Open AAA)

---



---

### Procedures Open AAA

---

Numerator: The number of Open AAA procedures.

Denominator: The total number of VS procedures.

---

### CTA (abnormal / performed)

---

Numerator: The number of Open AAA procedures that had an abnormal Computerized Tomographic Angiography (CTA) pre procedure.

Denominator: The total number of Open AAA procedures where a CTA was performed pre procedure.



Note: Pre procedure = the imaging study was performed within 6 months prior to the procedure.

---

## **MRI/MRA (abnormal / performed)**

---

Numerator: The number of Open AAA procedures that had an abnormal MRI/MRA pre procedure.

Denominator: The total number of Open AAA procedures where a MRI/MRA was performed pre procedure.

Note: Pre procedure = the imaging study was performed within 6 months prior to the procedure.

---

## **Cardiac Stress Test**

---

Numerator: The number of Open AAA procedures that had cardiac stress test pre procedure.

Denominator: The total number of Open AAA procedures.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

---

## **Abnormal**

---

Numerator: The number of Open AAA procedures that had an abnormal Cardiac Stress Test pre procedure.

Denominator: The total number of Open AAA procedures where a Cardiac Stress Test was performed pre procedure.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

---

## **EKG**

---

Numerator: The number of Open AAA procedures that had an abnormal EKG pre procedure.

Denominator: The total number of Open AAA procedures where an EKG was performed pre procedure.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

---

## **Prior CABG**

---

Numerator: The number of discharges with an Open AAA procedure where a CABG was performed within 6 months prior to the Open AAA.

Denominator: The total number of Open AAA procedures.

---

## **Prior PCI**

---

Numerator: The number of discharges with an Open AAA procedure where a PCI was performed within 6 months prior to the Open AAA.

Denominator: The total number of Open AAA procedures.

---

## **Indications (Open AAA)**

---

### **Procedures Open AAA**

---

Numerator: The number of Open AAA procedures.

Denominator: The total number of VS procedures.

---

### **Asymptomatic**

---

Numerator: The number of Open AAA procedures where the patient was Asymptomatic for AAA.

Denominator: The total number of Open AAA procedures.

Note: There can be multiple indications per procedure.

---

## Abdominal/Back Pain

---

Numerator: The number of Open AAA procedures where the patient presented with Abdominal/Back Pain.

Denominator: The total number of Open AAA procedures.

Note: there can be multiple indications per procedure.

---

## Ruptured AAA

---

Numerator: The number of Open AAA procedures with a Ruptured AAA.

Denominator: The total number of Open AAA procedures.

---

## Procedure Details (Open AAA)

---

### Procedures Open AAA

---

Numerator: The number of Open AAA procedures.

Denominator: The number of VS procedures.

---

### Maximum AAA Diameter (mean, stdev)

---

The average (mean) and standard deviation of Maximum AAA Diameter for Open AAA procedures.

Exclusions:

- Open AAA procedures performed for iliac aneurysm repair only.
  - Open AAA procedures where Not Documented was entered for Maximum AAA Diameter.
- 

### Conversion from Endovascular Repair

---

Numerator: The number of Open AAA procedures where a Conversion from Endovascular Repair occurred.

Denominator: The total number of Open AAA procedures.

---

### Conversion from Endovascular Repair Timeframe

---

Numerator: The number of X timeframe that the conversion from endovascular repair took place.

Denominator: the total number of Open AAA procedures that had a Conversion from Endovascular Repair.

---

### Graft Body Diameter (mean, stdev)

---

The average (mean) and standard deviation of Graft Body Diameter for Open AAA procedures.

Exclusion: Open AAA procedures where a value for Graft Body Diameter is not entered.

---

### Graft Type

---

Numerator: The number of Open AAA procedures that had X graft type implanted.

Denominator: The total number of Open AAA procedures where a graft was implanted.

---

## Proximal Clamp Position

---

Numerator: The number of X proximal clamp positions for Open AAA procedures.

Denominator: The total number of Open AAA procedures.

---

## Pre Imaging Studies (Revasc / Bypass)

---

---

### Procedures Revasc / Bypass

---

Numerator: The number of Open Bypass procedures.

Denominator: The total number of VS procedures.

---

### CTA (abnormal / performed)

---

Numerator: The number of Open Bypass procedures that had an abnormal Computerized Tomographic Angiography (CTA) pre procedure.

Denominator: The total number of Open Bypass procedures where a CTA was performed pre procedure.

Note: Pre procedure = the imaging study was performed within 6 months prior to the procedure.

---

### MRI/MRA (abnormal / performed)

---

Numerator: The number of Open Bypass procedures that had an abnormal MRI/MRA pre procedure.

Denominator: The total number of Open Bypass procedures where a MRI/MRA was performed pre procedure.

Note: Pre procedure = the imaging study was performed within 6 months prior to the procedure.

---

### Cardiac Stress Test

---

Numerator: The number of Open Bypass procedures that had cardiac stress test pre procedure.

Denominator: The total number of Open Bypass procedures.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

---

### Abnormal

---

Numerator: The number of Open Bypass procedures that had an abnormal Cardiac Stress Test pre procedure.

Denominator: The total number of Open Bypass procedures where a Cardiac Stress Test was performed pre procedure.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

---

### EKG (abnormal / performed)

---

Numerator: The number of Open Bypass procedures that had an abnormal EKG pre procedure.

Denominator: The total number of Open Bypass procedures where an EKG was performed pre procedure.

Note: Pre procedure = the test was performed within 6 months prior to the procedure.

---

### Prior CABG

---

Numerator: The number of discharges with an Open Bypass procedure where a CABG was performed within 6 months prior to the Open Bypass.

Denominator: The total number of Open Bypass procedures.

---

## **Prior PCI**

---

Numerator: The number of discharges with an Open Bypass procedure where a PCI was performed within 6 months prior to the Open Bypass.

Denominator: The total number of Open Bypass procedures.

---

## **Contrast cineangiography**

---

Numerator: The number of Open Bypass procedures that had an abnormal contrast cineangiography pre procedure.

Denominator: The total number of Open Bypass procedures with a documented pre procedure contrast cineangiography.

Note: Pre procedure = the imaging study was performed within 6 months prior to the procedure.

---

## **Indications (Revasc / Bypass)**

---

### **Procedures Revasc / Bypass**

---

Numerator: The number of Open Bypass procedures.

Denominator: The total number of VS procedures.

---

### **Asymptomatic**

---

Numerator: The number of Open bypass procedures where the patient was Asymptomatic for AAA.

Denominator: The total number of Open Bypass procedures.

Note: There can be multiple indications per procedure.

---

### **Claudication**

---

Numerator: The number of Open Bypass procedures where the patient presented with Claudication.

Denominator: The total number of Open bypass procedures.

Note: There can be multiple indications per procedure.

---

### **Rest Pain**

---

Numerator: The number of Open Bypass procedures where the patient presented with Rest Pain.

Denominator: The total number of Open Bypass procedures.

Note: There can be multiple indications per procedure.

---

### **Ulcer / Gangrene**

---

Numerator: The number of Upper Extremity Open Bypass procedures where Ulcer / Gangrene is entered and the number of Lower Extremity Open Bypass procedures that have Wound (WIFI) entered.

Denominator: The total number of upper extremity and lower extremity open bypass procedures.

---

Note: There can be multiple indications per procedure.

---

## Acute Limb Ischemia

---

Numerator: The number of Open Bypass procedures where the patient presented with Acute Limb Ischemia.

Denominator: The total number of Open Bypass procedures.

Note: There can be multiple indications per procedure.

---

## Procedure Details (OT/Revasc / Bypass)

---

---

### Procedures Open Thrombectomy

---

Numerator: The number of Open Thrombectomy procedures.

Denominator: The total number of VS procedures.

---

### Procedures Revasc/Bypass

---

Numerator: The number of Open Bypass procedures.

Denominator: The total number of VS procedures.

---

## Inflow

---

---

### Aorto-Femoral

---

Numerator: The number of Open Bypass procedures that have a Graft Origin in the Aorta and a Graft Insertion or Graft Insertion #2 in a Femoral artery.

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

### Femoral-femoral

---

Numerator: The number of Open Bypass procedures that have a Graft Origin in a Femoral artery and a Graft Insertion or Graft Insertion #2 also in a Femoral artery.

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

### Axillary-femoral

---

Numerator: The number of Open Bypass procedures that have a Graft Origin in an Axillary artery and a Graft Insertion or Graft Insertion #2 in a Femoral artery.

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

### Other Inflow

---

Numerator: The number of Open Bypass procedures that have a graft implanted in the axillary, aorta, or iliac arteries and the distal end of the graft does not extend beyond the profunda femoris.

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

## Outflow

---

---

### Femoral-Popliteal

---

Numerator: The number of Open Bypass procedures that have a Graft Origin in a Femoral artery and a Graft Insertion or Graft Insertion #2 in a Popliteal artery.

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

### **Femoral-Tibial**

---

Numerator: The number of Open Bypass procedures that have a Graft Origin in a Femoral artery and a Graft Insertion or Graft Insertion #2 in a Tibial artery.

Denominator: The total number of Open Bypass Procedures where a graft was implanted.

---

### **Popliteal-Tibial**

---

Numerator: The number of Open Bypass procedures that have a Graft Origin in a Popliteal artery and a Graft Insertion or Graft Insertion #2 in a Tibial artery.

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

### **Popliteal-Popliteal**

---

Numerator: The number of Open Bypass procedures that have a Graft Origin in a Popliteal artery and a Graft Insertion or Graft Insertion #2 also in a Popliteal artery.

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

### **Other Outflow**

---

Numerator: The number of Open Bypass procedures where the Graft Insertion or Graft Insertion #2 is an upper or lower extremity artery.

Exclusions from the numerator:

The Graft Origin is in the following arteries

- Common Femoral Artery
- Superficial Femoral Artery
- Popliteal Artery

Denominator: The total number of Open Bypass procedures where a graft was implanted.

---

### **Vein Graft**

---

Numerator: The number of Vein Grafts used for Open Bypass procedures.

Denominator: The total number of Open Bypass procedures.

---

### **Vein Graft Location**

---

Numerator: The number of X Vein Graft Location.

Denominator: The total number of Open Bypass procedures that had a Vein Graft.

---

### **Prosthetic Graft**

---

Numerator: The number of Prosthetic Grafts for Open Bypass procedures.

Denominator: The total number of Open Bypass procedures.

---

### **Prosthetic Graft Type**

---

Numerator: The number of X Prosthetic Graft Type that was used for Open Bypass procedures.

Denominator: The total number of Open Bypass procedures where a Prosthetic Graft was implanted.

---

### **Intraoperative Graft Revision**

---

Numerator: The number of Open Bypass procedures with a documented Intraoperative Graft Revision.

Denominator: The total number of Open Bypass procedures.

---

### **Additional concomitant procedures**

---

Numerator: The number of Open Bypass procedures where an additional concomitant procedure was performed.

Denominator: The total number of Open Bypass procedures.

---

### **Type of Additional Concomitant Procedure**

---

Numerator: The X type of additional concomitant procedure that was performed during an Open Bypass.

Denominator: The total number of Open Bypass procedures where an additional concomitant procedure was performed.

---

## Outcomes

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---

### Outcomes in OR

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---

#### Death in OR

---

Numerator: The number of VS procedures where a death occurred in the OR.

Denominator: The total number of VS procedures.

Note: For discharges with multiple procedures, death will only be counted once.

---

---

#### Myocardial Infarction

---

Numerator: The number of VS procedures where an MI occurred in the OR.

Denominator: The total number of VS procedures.

---

---

#### Cardiac arrest

---

Numerator: The number of VS procedures where a cardiac arrest occurred in the OR.

Denominator: The total number of VS procedures.

Note: For discharges with multiple procedures, cardiac arrest will only be counted once.

---

---

#### Stent/Graft Thrombosis

---

Numerator: The number of VS procedures where thrombus formed in a stent or graft during the procedure.

Denominator: The total number of VS procedures.

Note: For discharges with multiple procedures, stent/graft thrombosis is only counted once.

---

---

#### Unsuccessful Stent/Graft Thrombosis

---

Numerator: The number of VS procedures where a thrombosis that formed in a stent or graft during the procedure was treated unsuccessfully.

Denominator: The total number of VS procedures where a thrombosis that formed in a stent or graft during the procedure.

---

---

#### Transfusion (PRBC)

---

Numerator: The number of VS procedures where a patient had a Transfusion of PRBCs during the procedure.

Denominator: The total number of VS procedures.

Exclusions:

- Ruptured AAA repair
- Indication of Trauma

Note: For discharges with multiple procedures, transfusion is only counted once.

---

---

#### Outcomes Prior to Discharge

---



The outcomes that are measured in this section are outcomes that occurred post-procedure and before discharge.

---

## Death

---

Numerator: The number of discharges containing a VS procedure where a patient died post-procedure and prior to discharge.

Denominator: The number discharges that containing a VS procedure.

Note: Deaths are counted once for discharges that have multiple procedures.

---

## Myocardial Infarction

---

Numerator: The number of discharges containing a VS procedure where a Myocardial Infarction (MI) occurred post-procedure and before discharge.

Denominator: The number of discharges containing a VS procedure.

Note: MI includes Type 2 Myocardial Infarction, Type 1 NSTEMI or STEMI.

---

## Infection/Sepsis

---

Numerator: The number of discharges with a VS procedure where an infection/sepsis developed post-procedure and before to discharge.

Denominator: The number of discharges with a VS procedure.

Note: Multiple Infection/Sepsis are only counted once per discharge.

---

## Source of Infection/Sepsis

---

Numerator: The number of X source of Infection/Sepsis.

Denominator: The number of discharges with a VS procedure where an infection developed post-procedure and before discharge.

---

## Stent / Graft Thrombosis

---

Numerator: The number of discharges with a VS procedure where a Stent/Graft Thrombosis occurred post-procedure and before to discharge.

Denominator: The number of discharges with a VS procedure.

Note: Multiple Stent/Graft Thrombosis are only counted once per discharge.

---

## Unsuccessful

---

Numerator: The number of Stent/Graft Thrombosis that were treated unsuccessfully.

Denominator: The number of discharges with a VS procedure where a Stent/Graft Thrombosis occurred post-procedure and before to discharge.

---

## Amputation (planned)

---

Numerator: The number of discharges with a VS procedure where an Amputation was performed post-procedure and before discharge.

Denominator: The total number of discharges with a VS procedure.

Note: Multiple options may be selected.

---

## Location of Amputation

---

Numerator: The number of X location of amputation.

Denominator: The total number of discharges with a VS procedure where an amputation was performed post-procedure and before discharge.

---

## **TIA/stroke**

---

Numerator: The number of discharges with a VS procedure where a patient had a TIA/Stroke post-procedure and before discharge.

Denominator: The number of discharges with a VS procedure.

Note: Multiple TIAs/-strokes are only counted once per discharge.

---

## **Bowel Ischemia**

---

Numerator: The number of discharges with a VS procedure where Bowel Ischemia developed post-procedure and before discharge.

Denominator: The total number of discharges with a VS procedure.

---

## **Length of Stay (mean, stdev)**

---

The average (mean) and standard deviation of length of stay for X procedure. Length of stay is calculated as date of discharge minus the date of admission.

---

## **Length of Stay Post-op (mean, stdev)**

---

The average (mean) and standard deviation of the length of stay post-op for X procedure. The length of stay post-op is calculated as the date of discharge minus the procedure end date of the first procedure within a discharge.

---

## **CIN**

---

Vascular Surgery CIN is calculated only for discharges with an EVAR procedure. EVAR discharges that have a ruptured AAA repair are excluded from the CIN measures.

---

## **Discharges w/ EVAR**

---

Numerator: The number of discharges containing an EVAR procedure.

Denominator is the total number of discharges containing an Open AAA, EVAR, or Open Bypass procedure.

Exclusion: Procedures with a Ruptured AAA.

---

## **CIN Potential**

---

Numerator: The number of discharges with an EVAR procedure that meet all the following criteria:

- A pre-procedure creatinine value is entered into the website
- A post-procedure creatinine (Peak, Discharge, or Post Discharge) value is entered into the website
- The patient does not have a history of renal transplant or kidney failure
- The patient did not die during the EVAR
- The EVAR was not performed for ruptured AAA repair.

Denominator: The total number of discharges with an EVAR procedure.

---

## **Missing Creatinine (pre)**

---

Numerator: The number of discharges with an EVAR procedure where the pre procedure creatinine value is entered as Not drawn. EVAR procedures that have a Ruptured AAA are excluded from the numerator.

Denominator: The total number of discharges with a VS procedure.

### Missing Creatinine (post)

Numerator: The number of discharges with an EVAR procedure where the post procedure peak creatinine, discharge creatinine, and post-discharge creatinine values for that EVAR procedure are all entered as "Not drawn". EVAR procedures that have a Ruptured AAA are excluded from the numerator.

Denominator: The total number of discharges containing an EVAR procedure.

### CIN Excluded

EVAR procedures where the patient has a history of renal failure requiring dialysis or renal transplant (including failed transplants) are excluded from the CIN measure.

### Hx Renal Failure req Dialysis

Numerator: The number of discharges with an EVAR procedure where the patient has a History of Renal Failure Currently Requiring Dialysis.

Denominator: The total number of EVAR procedure procedures.

### Renal Transplant

Numerator: The number of discharges with an EVAR procedure where the patient has a history of a renal transplant. A history of failed renal transplants is included in this measure.

Denominator: The total number of EVAR procedures.

### CIN

CIN is defined as a  $> 0.5$  mg/dL increase of post procedure creatinine from pre-procedure creatinine.

Numerator: The number of discharges with an EVAR procedure with an increase of post procedure creatinine of  $>0.5$  mg/dL.

Denominator: The number of discharges with an EVAR procedure.

Exclusions:

- the patient is on dialysis for renal failure pre procedure
- renal transplant
- death in OR
- ruptured AAA
- No value for pre-procedure creatinine
- No value for peak post procedure creatinine, discharge creatinine, or post-discharge creatinine

### Creatinine (pre) $\geq 1.5$

Numerator: The number of discharges with an EVAR procedure where the pre procedure creatinine value for the first EVAR procedure is  $\geq 1.5$ .

Denominator: The total number of discharges with an EVAR procedure where a pre procedure creatinine value was entered for the first EVAR procedure.

Exclusions:

- Renal Failure Currently Requiring Dialysis
- Ruptured AAA

### Post-Cr drawn for high risk patients (EVAR)

Numerator: The number of discharges with an EVAR procedure where the first EVAR procedure has a pre-procedure creatinine  $\geq 1.5$  and either a post procedure peak creatinine value, discharge creatinine value or post-discharge creatinine value was entered.

Denominator: The number of discharges with an EVAR procedure in which the first EVAR procedure has a pre-procedure creatinine  $\geq 1.5$ .

Exclusions:

- Renal Failure Currently Requiring Dialysis
- Death during the procedure
- No contrast was used during the procedure
- CO2 is entered for contrast type

---

## Pre Procedure Hydration - High Risk Patients (EVAR)

---

Numerator: The number of discharges with an EVAR procedure that have a pre-procedure creatinine  $\geq 1.5$  and IV fluids (Saline, Lactated Ringer's, Other Hydration, or Sodium Bicarbonate) was administered pre procedure.

Denominator: The number of discharges with an EVAR procedure where the first EVAR procedure has a pre-procedure creatinine  $\geq 1.5$ .

Exclusions:

- Renal Failure Currently Requiring Dialysis
- Ruptured AAA

---

## Transfusion

---

---

### Pre procedure Hgb (mean, stdev)

---

The average (mean) and standard deviation of the pre-procedure Hgb value for all discharges with a VS procedure.

Exclusions:

- Ruptured AAA repair
- Indication of Trauma

---

## Anemia (pre-procedure)

---

Numerator: The number of discharges with a VS procedure that have a pre-procedure hemoglobin value of  $< 13$  for males,  $< 12$  for females.

Denominator: The total number of discharges with a VS procedure.

Exclusions:

- Ruptured AAA repair
- Indication of Trauma

Reference:

<http://en.wikipedia.org/wiki/Anemia>

---

## Post Procedure Nadir Hemoglobin (mean, stdev)

---

The average (mean) and the standard deviation for Post Procedure Nadir Hemoglobin values for discharges with a VS procedure.

Exclusions:

- Ruptured AAA repair
- Indication of Trauma

---

## Transfusion PRBC (all discharges)

---

Numerator: The number of discharges with an Open AAA, EVAR, or Open Bypass procedure in which a post-procedure transfusion of PRBCs was given.

Denominator: The number of discharges with an Open AAA, EVAR, or Open Bypass procedure.

Note: Multiple Transfusions given during a discharge are counted once.

Exclusions:

- Ruptured AAA repair
- Indication of Trauma

---

## All Discharges Transfused w/Hgb $\geq 8$

---

Numerator: The number of discharges with an Open AAA, EVAR or, Open Bypass procedure where a post-procedure transfusion of PRBCs was given and the Hemoglobin value prior to the Transfusion is  $\geq 8.0$ .

Denominator: The number of discharges with an Open AAA, EVAR, or Open Bypass procedure where a post-procedure transfusion of PRBCs was given.

Exclusions:

- Ruptured AAA repair
- Indication of Trauma

---

## Transfusion when Asymptomatic with Hgb $\geq 8.0$ (Discharge level)

---

Numerator: The number of discharges with an Elective Open AAA, EVAR, or Open Bypass procedure that have a transfusion of PRBCs within 30 days of the procedure end date, the value of the hemoglobin prior to transfusion is  $\geq 8.0$ , and the patient is asymptomatic before the transfusion.

Denominator: The number of discharges with an Elective Open AAA, EVAR, or Open Bypass procedure that have a transfusion of PRBCs within 30 days of the procedure end date.

Exclusions from the denominator:

- Ruptured AAA repair
- Indication of Trauma

---

## Vascular Surgery Key Indicators of Performance

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This portion of the report contains the various QI goals set for vascular surgery. Specifics are included in each item definition.

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### Elective VS Discharges (OAAA, EVAR, OBP)

---

Numerator: The number of discharges in which the first procedure is an Elective Open AAA, EVAR, or Open Bypass procedure.

Denominator: The number of discharges in which the first procedure is an Elective Open AAA, EVAR, or Open Bypass procedure.

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### Total Elective Discharges (OAAA, EVAR, OBP, CEA, CAS)

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Numerator: The number of discharges in which the first procedure is an Elective Open AAA, EVAR, Open Bypass, CEA, or CAS procedure.

Denominator: The number of discharges in which the first procedure is an Elective Open AAA, EVAR, Open Bypass, CEA, or CAS procedure.

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### Readmission for SSI (Procedure end to 30 Days)

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Numerator: The number of discharges with an elective OAAA, EVAR, or Open Bypass procedure that have Readmission to Hospital for a graft infection or wound infection/dehiscence that is within 30 days of the procedure end date.

Denominator: The total number of discharges with an Elective OAAA, EVAR, or Open Bypass procedure.

Note: For discharges with multiple procedures, the discharge is included in the numerator and denominator if the first VS procedure (OAAA, EVAR, Open Bypass) in the discharge is an Elective procedure.

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### SSI Rate (Procedure end to 30 days)

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Numerator: The number of discharges with an Elective Open AAA, EVAR or Open Bypass procedure that have a post procedure outcome of graft infection or Wound site infection within 30 days of the procedure end date.

Denominator: The total number of discharges with an Elective Open AAA, EVAR, or Open Bypass procedure.

Note: For discharges with multiple procedures, the discharge is included in the numerator and denominator if the first VS procedure (OAAA, EVAR, Open Bypass) in the discharge is an Elective procedure.

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### Post-Op Myocardial Infarction Rate (Procedure end to 30 days)

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Numerator: The number of discharges with an Elective Open AAA, EVAR, Open Bypass, CEA, or CAS procedure where a myocardial infarction (MI) occurred within 30 days of the procedure end date.

Denominator: The total number of discharges with an Elective Open AAA, EVAR, Open Bypass, CEA, or CAS procedure.

Note: MI includes Type 2 Myocardial Infarction, Type 1 NSTEMI or STEMI.

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### Vascular Surgery Any Anti-Platelet at Discharge

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Numerator: The number of discharges with an Open Bypass, CEA, or CAS procedure where an antiplatelet was ordered or continued at discharge.

Denominator: The number of discharges containing an Open Bypass, CEA, or CAS procedure. **Goal: >95%.**

Antiplatelets included in this measure:

- Aspirin
- Clopidogrel (Plavix)
- Prasugrel (Effient)
- Ticlopidine (Ticlid)
- Ticagrelor (Brilinta)
- Cilostazol (Pletal)

Exclusions:

- Death during the procedure or post procedure
- The patient was discharge to Hospice, An Other Acute Care Hospital, or Left AMA
- A contraindication to the medications above
- Indication of Trauma

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## Vascular Surgery Statin at Discharge

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Numerator: Number of discharges with an Open Bypass, CEA, or CAS procedure where a statin was prescribed or continued at discharge.

Denominator: The total number of discharges with an Open Bypass, CEA, or CAS procedure.

Exclusions:

- An indication of peripheral aneurysm repair or trauma.
- The patient was discharged to an Other Acute Care Hospital or Left AMA.
- A death occurred during the procedure or after the procedure.
- A contraindication to a statin.

**Goal >95%**

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## Elective EVAR not discharged by post-op day 2

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Numerator: The number of discharges with an elective EVAR procedure that has a post procedure LOS >3.

- Intra-operative and post-operative outcomes are excluded from the numerator only.

Denominator: The total number of discharges with an elective EVAR procedure.

**Goal: <10%**

Exclusions from the numerator and denominator:

- EVAR procedures that are performed concurrently with another VS or carotid procedure within the same discharge.
- EVAR procedures performed with a Fenestrated Graft.

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## Elective asymptomatic CEA not discharged home by post-op day 2

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Numerator: The number of discharges with an elective CEA procedure that are asymptomatic and have a post procedure LOS >3. LOS is calculated as the discharge date minus the date of procedure +1.

Denominator: The number of discharges with an elective CEA procedure that are asymptomatic.

Exclusions:

- CEAs performed concurrently with CABG
- Indication of Urgent Cardiac Surgery within 30 days
- An intra-operative or post-operative complication
- CEAs performed with any other VS or carotid procedure within the same discharge

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## Readmission - All Cause (Procedure end to 30 Days)

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Numerator: The number of discharges with an Elective Open Bypass, EVAR, or Open AAA procedure that have a readmission to the hospital for the following outcomes within 30 days of the procedure end date:

- Lymph leak
- Wound infection/dehiscence
- Graft infection
- Anticoag complication
- Thrombectomy/lysis

Denominator: The total number of discharges with an elective Open Bypass, EVAR, or Open AAA procedure.

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## EVAR Opioid naïve patients prescribed $\leq 4$ opioid pills at discharge (P4P)

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Numerator: Number of opioid naïve EVAR discharges with an opioid prescription at discharge of  $\leq 4$  pills.

Denominator: Number of opioid naïve EVAR discharges.

Exclusions from the numerator:

- EVAR discharges where Not Documented is marked for Quantity prescribed

Exclusions from the numerator and denominator:

- EVARs performed concurrently with another procedure
- Cutdowns
- A discharge status of death.

*Please note: Opioid naïve is defined as no opioids taken by the patient  $>30$  days before admission to the hospital.*

**Goal  $\geq 70\%$ .**

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## CEA Opioid naïve patients prescribed $\leq 4$ opioid pills at discharge (P4P)

---

Numerator: Number of opioid naïve CEA discharges with an opioid prescription at discharge of  $\leq 4$  pills. CEA discharges where Not Documented is marked for Quantity prescribed are excluded from the numerator.

Denominator: Number of opioid naïve CEA discharges.

Exclusions from the numerator and denominator.

- CEA performed concurrently with CABG.
- Discharge status of death.

*Please note: Opioid naïve is defined as no opioids taken by the patient  $>30$  days before admission to the hospital.*

**Goal  $\geq 70\%$ .**

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## Proportion of smokers who receive smoking cessation treatment (VBR)

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Numerator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco and at least 2 of 3 smoking cessation interventions (Physician-delivered advice, Nicotine replacement therapy, Referral to smoking counseling services) were implemented before the hospital admission date, during the hospitalization or at the time of discharge.

Denominator: The number of discharges with an elective VS or carotid procedure where the patient currently smokes cigarettes, cigars, pipe, or chews tobacco.

Exclusion: Death during procedure, death post-procedure, or death at discharge.

**Goal:  $\geq 25\%$**



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## Vascular Surgery Goal Graphs

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Each graphs will be a bar plot. On the x axis, each hospital is listed. On the y axis, X metric is listed.

The hospitals on the report graphs are blinded, meaning they are not listed by their hospital code number. For convenience, we also color the bar representing the specific hospital that pertains to that report.

If the metric has a goal, a horizontal line will be drawn on the graph to indicate where the goal lies.

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### Post-Op Myocardial Infarction Rate - Goal $\leq 3\%$

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For each hospital, compute the percentage of discharges with a post-op Myocardial Infarction. This is the same as the definition for [Post-Op Myocardial Infarction \(Procedure End to 30 Days\)](#) rate on the Vascular Surgery Key Indicators of Performance page. **Goal < 3.0%.**

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### Vascular Surgery Any Anti-Platelet at Discharge - Goal $\geq 95\%$

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For each hospital, compute the percentage of discharges meeting the Any Anti-Platelet at discharge criteria . This is the same as the definition for [Vascular Surgery Any Anti-Platelet at Discharge](#) on the Vascular Surgery QI Goals page.

**Goal  $\geq 95\%$**

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### Vascular Surgery Statin at Discharge - Goal $\geq 95\%$

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For each hospital, compute the percentage of discharges meeting the Statin at discharge criteria . This is the same as the definition for [Vascular Surgery Statin at Discharge](#) on the Vascular Surgery Key Indicators of Performance page.

**Goal  $\geq 95\%$**

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### Post Creatinine Drawn - High Risk Patients (EVAR) - Goal $\geq 75\%$

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For each hospital, compute the percentage of discharges containing an EVAR with a pre procedure creatinine  $\geq 1.5$  that had a post creatinine drawn. This is the same as the definition for [Post Creatinine Drawn - High Risk Patients \(EVAR\)](#) on the Vascular Surgery CIN page.

**Goal  $\geq 75\%$**

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### Elective EVAR not discharged by post-op day 2 - Goal <10%

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For each hospital, compute the percentage of elective EVARs meeting the P4P criteria for LOS. This is the same as the definition for [Elective EVAR not discharged by post-op day 2](#) on the Vascular Surgery Key Indicators of Performance page.

**Goal < 10%**

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### Elective asymptomatic CEA not discharged home by post-op day 2 - Goal <8.0%

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For each hospital, calculate the percentage of discharges meeting the CEA LOS criteria. This is the same as the definition for [Elective asymptomatic CEA not discharged home by post-op day 2 \(P4P\)](#) on the Vascular Surgery Key Indicators of Performance page.

**Goal <8.0%**

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### EVAR Opioid naïve patients prescribed $\leq 4$ opioid pills at discharge (P4P) - Goal $\geq 70\%$

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EVAR Opioid naïve patients prescribed  $\leq 4$  opioid pills at discharge (P4P) - Goal  $\geq 70\%$

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For each hospital, calculate the percentage of discharges meeting the EVAR Opioid at discharge criteria. This is the same as the definition for EVAR Opioid naïve patients prescribed  $\leq$  4 opioid pills at discharge (P4P) on the Vascular Surgery Key Indicators of Performance page.

**Goal  $\geq$  70%**

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## **CEA Opioid naïve patients prescribed $\leq$ 4 opioid pills at discharge (P4P) - Goal $\geq$ 70%**

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CEA Opioid naïve patients prescribed  $\leq$  4 opioid pills at discharge (P4P) - Goal  $\geq$  70%

For each hospital, calculate the percentage of discharges meeting the CEA Opioid at discharge criteria. This is the same as the definition for CEA Opioid naïve patients prescribed  $\leq$  4 opioid pills at discharge (P4P) on the Vascular Surgery Key Indicators of Performance page.

**Goal  $\geq$  70%**

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