Table e-1: Administrative Data Blood Pressure and Cholesterol Algorithms

**BLOOD PRESSURE ALGORITHM**

Data Quality: objective is to remove any BP values that are physiologically implausible

1. Remove any BP values that are physiologically implausible:
    - Missing Systolic OR Diastolic
    - Diastolic and Systolic both zero
    - Diastolic > Systolic
    - (Systolic – Diastolic) <10 mm Hg
    - Systolic < 60 mm Hg
2. If there are multiple BP measurements on the same day, take the last value.

Only include in the analysis BP values that are obtained from the following NEXXUS+ set of clinic (identified on the basis of stop code):

| CLINIC STOP CODES |
|---|
| 323 = Primary Care |
| 312 = Pulmonary/Chest |
| 303 = Cardiology |
| 322 = Women's Clinic |
| 305 = Endocrinology |
| 306 = Diabetes |
| 348 = Primary Care Group |
| 306 = Diabetes |
| 350 = Geriatric Primary Care |
| 309 = Hypertension/ |
| 313 = Renal/ Nephrology |
| 315 = Neurology |
| 301= General internal medicine |
| 318 = Geriatrics clinic |
| 319 = Geriatric evaluation and Management |
| 350 = Geriatric primary care |
| 310 = Infectious disease |
| 531 = Mental health primary care |

**CHOLESTEROL ALGORITHM**

Data Quality: objective is to remove any LDL values that are physiologically implausible

- LDL <5 mg/dl

- LDL >2400 mg/dl

Patients who have their fasting lipids measured within 2 days of index event unless there is a measurement available from within the prior 180 days

Calculating the LDL at Index: If the HDL, Triglycerides and Total Cholesterol values are available in the time frame, these can be used to calculate the LDL by using the formula below. (If within 2 days and if other values measured the same day). If Triglycerides<500, then LDL=TChol-HDL-(Trigs/5); If Triglycerides ≥500, then the calculation cannot be done

Table e-2: Pharmacological and Non-Pharmacological Cardiac Stress Testing Codes

**Common Procedural Terminology (CPT) Codes:**

Cardiolite (93015, 78465, 78478, 78400, A9500)

Gated Persantine (93015, 78465, 78478, 78480, J1245)

Gated Dobutamine (93015, 78461, 78465, 78478, A9500, A9505, J1250)

Resting Thallium (78464, A9505)

Stress Dobutamine (93015, 93350, J1250)

Stress Test (93015)

Stress Thallium (93015, 78465, A9505)

Thallium (93015, 78465, A9505, J1245)

**International Classification of Disease (ICD)-9 Codes:**

Other cardiovascular stress test (89.44, 89.41, 89.42, 89.43)

| Table e-3: Indications for Cardiac Stress Testing Obtained via Chart Review* | |
|---|---|
| Indication | Available Clinical History |
| Chest pain or angina | New onset chest pain and atrial fibrillation |
| Chest pain or angina | Atypical angina and Baseline ECG: Abnormal |
| Chest pain or angina | None provided |
| Elevated cardiac enzymes (e.g., troponin) | 81-year-old male with history of TIA's presents with symptoms similar to previous TIA's and elevated troponin (0.33 mcg/L). Electrocardiogram did not show any significant findings for ischemia. |
| Shortness of breath | Dyspnea, may be related to diastolic dysfunction |
| Heart failure | Dyspnea/congestive heart failure |
| Abnormal electrocardiogram | 72-year-old male with multiple health issues, HTN, HLD, history of CVA and abnormal glucose with arrhythmia and abnormal ECG. |
| Prior to surgery/pre-operative assessment | Rotator cuff surgery. |
| Prior to surgery/pre-operative assessment | Pre-op risk stratification-popliteal aneurysm repair. |
| Prior to surgery/pre-operative assessment | Pre-op evaluation for renal mass. |
| Prior to CEA/Stent procedure | NSVT, evaluation for ischemia, pre-op for CEA. |

| | |
|---|---|
| Prior to CEA/Stent procedure | 78-year-old male with severe R carotid stenosis with TIA 2 days ago, now stable pre-op CEA 1. |
| Prior to CEA/Stent procedure | Admitted for urgent right CEA due to 90% right carotid stenosis and left arm weakness and numbness. CEA planned for tomorrow. |
| Other | Transplant Referral End Stage Renal Disease. |
| Other | 57-year-old white male with h/o diverticulitis, hyperlipidemia who presented with right visual loss. Transthoracic echocardiogram with positive bubble study. |
| Other | Right hemispheric syndrome: Etiology from poorly controlled diabetes. |
| * Abbreviations: ECG, electrocardiogram; TIA, Transient ischemic attack; HTN, hypertension; HLD, hyperlipidemia; CVA, cerebrovascular accident; NSVT, non-sustained ventricular tachycardia; R, right; CEA, carotid endarterectomy | |