THE STRONG HEART STUDY VII
CARDIOVASCULAR DISEASE IN AMERICAN INDIANS
MORBIDITY SURVEY – DECISION

ID number: |_____|

Date of this event: |__/__/_____|
month / day / year

A. DIAGNOSIS (enter appropriate code number):

☐ 01. Definite non-fatal myocardial infarction

☐ 1b. Probable non-fatal myocardial infarction

☐ 02. Possible non-fatal myocardial infarction

☐ 03. Definite non-fatal stroke

☐ 04. Possible non-fatal stroke

☐ 06. Definite CHD

☐ 07. Possible CHD (those with some, but not all, criteria or with equivocal criteria for definite CHD)

☐ 08. TIA

☐ 09. Other CVD, specify: _____

☐ 10. Non–CVD, specify: _____

☐ 11. ESRD (dialysis or transplant): _____

☐ 12. Heart Failure (**Please fill out the HF PROCEDURE FORM**)

B. Criteria used:

1. MYOCARDIAL INFARCTION (Please check all applicable criteria)

A. Definite MI ☐

1. Evolving diagnostic ECG*, or ☐
2. Diagnostic biomarkers (2 x ULN)* ☐

B. Probable MI ☐

1. Positive ECG findings plus cardiac symptoms or signs without available biomarkers, or ☐
2. Positive ECG findings plus equivocal biomarkers ☐

C. Possible MI ☐

1. Equivocal biomarkers plus nonspecific ECG findings, or ☐
2. Equivocal biomarkers plus cardiac symptoms or signs, or ☐
3. Missing biomarkers plus positive ECG ☐

**** For ECG and cardiac biomarker definition, please refer to: SHS VI Manual, Section 2.3.***

COMMENTS: _____

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2. STROKE

A. Definite non-fatal stroke ☐

1. Stroke of unknown type etiology: Definite stroke of unknown etiology when CT or MRI not done. Information is inadequate to diagnose ischemic (infarction), intracerebral hemorrhage, or subarachnoid hemorrhage. ☐
2. Definite ischemic stroke: CT or MRI scan within 14 days of onset of a focal neurological deficit lasting more than 24 hours with evidence of brain infarction (mottled cerebral pattern or decreased density in a defined vascular territory), no intraparenchymal or subarachnoid hemorrhage by CT/MRI, (or lumbar puncture if done). A nonvascular etiology must be absent. ☐
3. Definite primary intracerebral hemorrhage: Focal neurological deficit lasting more than 24 hours. Confirmation of intraparenchymal hemorrhage in a compatible location, not caused by trauma, with CT/MRI scan within 14 days of stroke. ☐
4. Subarachnoid hemorrhage: Sudden onset of a headache, neck stiffness, loss of consciousness. There may be a focal neurological deficit, but neck stiffness is more prominent. Blood in the subarachnoid or intraventricular space by CT/MRI - not caused by trauma. ☐
5. Non-fatal stroke after cardiovascular invasive interventions: Stroke associated with the intervention within 30 days of cardiovascular surgery, or within 7 days of cardiac catheterization, arrhythmia ablation, angioplasty, atherectomy, stent deployment or other invasive coronary or peripheral vascular interventions. ☐
6. Non-fatal stroke post non-cardiovascular surgery: Stroke occurring within 30 days of non-cardiovascular surgery. ☐

B. Possible non-fatal stroke ☐

a. History or rapid onset (approximately 48 hours from onset to time of admission or maximum acute neurologic deficit) of localizing neurologic deficit and/or change in state of consciousness, and ☐

1b. Documentation of localizing neurologic deficit by unequivocal physician or laboratory finding within 6 weeks of onset with 24 hours duration of objective physician findings, or ☐

2a. Discharge diagnosis with consistent primary or secondary codes (ICD-9-CM codes 431, 432, 434, 436, 437), and ☐

2b. No evidence by unequivocal physician or laboratory findings of any other disease process or event causing focal brain deficit or coma other than cerebral infarction or hemorrhage according to hospital records. ☐

C. Ischemic stroke subtype classification (complete for cases of definite ischemic stroke).

☐ 1. Large-artery atherosclerosis: Clinical and brain imaging findings of either significant (>50%) stenosis or occlusion of a major brain artery or branch cortical artery, presumably due to atherosclerosis, and clinical findings of cerebral cortical impairment (aphasia, neglect, restricted motor involvement, etc.) or brain stem or cerebellar dysfunction. A history of intermittent claudication, transient ischemic attacks (TIAs) in the same vascular territory, a carotid bruit, or diminished pulses helps support the clinical diagnosis. Cortical or cerebellar lesions and brain stem or subcortical hemispheric infarcts greater than 1.5 cm in diameter on CT or MRI are considered to be of potential large-artery atherosclerotic origin. Supportive evidence by duplex imaging or arteriography of a stenosis of greater than 50% of an appropriate intracranial or extracranial artery is needed. Diagnostic studies should exclude potential sources of cardiogenic embolism. The diagnosis of stroke secondary to large- artery atherosclerosis cannot be made if duplex or arteriographic studies are normal or show only minimal changes.

*Probable ☐ *Possible ☐

☐ 2. Cardioembolism: Patients with arterial occlusions presumably due to an embolus arising in the heart. Cardiac sources are divided into high-risk and medium-risk groups based on the evidence of their relative propensities for embolism. At least one cardiac source for an embolus must be identified for a possible or probable diagnosis of cardioembolic stroke. Clinical and brain imaging findings are similar to those described for large-artery atherosclerosis. Evidence of a previous TIA or stroke in more than one vascular territory or systemic embolism supports a clinical diagnosis of cardiogenic stroke. Potential large-artery atherosclerotic sources of thrombosis or embolism should be eliminated. A stroke in a patient with a medium-risk cardiac source of embolism and no other cause of stroke is classified as a possible cardioembolic stroke.

*Probable ☐ *Possible ☐

☐ 3. Small-artery occlusion (lacune): Patients whose strokes are often labeled as lacunar infarcts in other classifications. The patient should have one of the traditional clinical lacunar syndromes and should not have evidence of cerebral cortical dysfunction (aphasia, neglect, restricted motor involvement, etc.). A history of diabetes mellitus or hypertension supports the clinical diagnosis. The patient should also have a normal CT/MRI examination or a relevant brain stem or subcortical hemispheric lesion with a diameter of less than 1.5 cm demonstrated. Potential cardiac sources for embolism should be absent, and evaluation of the large extracranial arteries should not demonstrate a stenosis of greater than 50% in an ipsilateral artery.

*Probable ☐ *Possible ☐

* A **probable** diagnosis is made if the clinical findings, neuroimaging data, and results of diagnostic studies are consistent with one subtype and other etiologies have been excluded. A **possible** diagnosis is made when the

clinical findings and neuroimaging data suggest a specific subtype but other studies are not done.

☐ 4. Acute stroke of other determined etiology: Patients with rare causes of stroke, such as non atherosclerotic vasculopathies, hypercoagulable states, or hematologic disorders. Patients in this group should have clinical and CT or MRI findings of an acute ischemic stroke, regardless of the size or location. Diagnostic studies such as blood tests or arteriography should reveal one of these unusual causes of stroke. Cardiac sources of embolism and large-artery atherosclerosis should be excluded by other studies.

☐ 5. Stroke of undetermined etiology: In several instances, the cause of a stroke cannot be determined with any degree of confidence. Some patients will have no likely etiology determined despite an extensive evaluation. In others, no cause is found but the evaluation was cursory. This category also includes patients with two or more potential causes of stroke so that the physician is unable to make a final diagnosis. For example, a patient with a medium-risk cardiac source of embolism who also has another possible cause of stroke identified would be classified as having a stroke of undetermined etiology. Other examples would be a patient who has atrial fibrillation and an ipsilateral stenosis of 50%, or the patient with a traditional lacunar syndrome and an ipsilateral carotid stenosis of 50%.

COMMENTS: _____

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3. DEFINITE CORONARY HEART DISEASE (CHD)

a. Cardiac cath proven coronary artery disease (1 or more vessels ≥ 50% stenosis), ***or*** ☐

b. PTCA, ***or*** ☐

c. Coronary artery bypass grafting, ***or*** ☐

d1. Abnormal stress ECG, **and** ☐

d.2. Abnormal imaging, ***or*** ☐

e. Positive functional test of ischemia (such as treadmill) ☐

COMMENTS: _____

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4. HEART FAILURE ***(if yes, fill out Heart Failure form)***

Two major criteria or one major and two minor criteria:

a. Major criteria
- ☐ i. Paroxysmal nocturnal dyspnea or Orthopnea
- ☐ ii. Neck vein distention
- ☐ iii. Rales
- ☐ iv. Cardiomegaly
- ☐ v. Acute pulmonary edema
- ☐ vi. S3 gallop
- ☐ vii. Increased venous pressure >16cm water
- ☐ viii. Circulation time ≥ 25 seconds
- ☐ ix. Hepatojugular reflux

b. Minor criteria
- ☐ i. Ankle edema
- ☐ ii. Night cough
- ☐ iii. Dyspnea on exertion
- ☐ iv. Hepatomegaly
- ☐ v. Pleural effusion
- ☐ vi. Vital capacity reduced by one-third from maximum
- ☐ vii. Tachycardia (rate of ≥ 120/min.)

c. Major or minor criteria
- ☐ i. Weight loss > 4.5kg in 5 days in response to treatment

AND

d. ☐ No known non-cardiac process leading to fluid overload such as renal failure

COMMENTS: _____

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5. OTHER NON-FATAL CARDIOVASCULAR DISEASE

a. Purposely left blank – CHF moved to #4 above

- ☐ b. CHF secondary to ESRD (diagnosis = 10)
- ☐ c. Cardiomyopathy
- ☐ d. Valvular Heart Disease
- ☐ e. Left Ventricular Hypertrophy
- ☐ f. Atrial Fibrillation
- ☐ g. Non-coronary heart surgery or carotid or other vascular surgery (does not include procedures for PVD)
- ☐ h. Pacemaker implantation
- ☐ i. Positive non-coronary angiography (does not include procedures for PVD)
- ☐ j. Arrhythmia
- ☐ k. Angina pectoris (Class 2 chest pain, or relieved by nitroglycerides; diagnosis = 07)
- ☐ l. PVD (either peripheral arterial surgical procedures, angiogram or amputation)
- ☐ m. Aortic aneurysm

If there was coronary or peripheral vascular procedure done, fill out CVD Test Procedures form or Peripheral Vascular Procedure form.

COMMENTS: _____

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ADMINISTRATIVE INFORMATION:

Reviewer code: |_____|

Review date: |_____/___/_____|
month / day / year

If you have any comments on this case, please use the space below: