APPENDIX A: Reference Tables for Diagnosis of Myocardial Infarction – used for adjudications beginning November 1, 2016

Table A1 Definition of Criteria for Diagnosis of Myocardial Infarction

Table A1.1 Algorithm for Type 1 (spontaneous) and Type 2 (ischemic imbalance) MI

Abnormal enzymes (troponin or CK-MB): Detection of at least one cardiac biomarker value >99th%tile of the URL; rise and/or fall of biomarkers should be noted, but may not be required in all cases; plus any ONE of the following:	
1. Symptoms of myocardial ischemia (i.e., chest pain)	MI
2. ECG findings (EPICARE CODE): • New or presumed new significant ST-segment–T wave (ST–T) changes **(NH3 or NH4)** • New LBBB **(NH2)** • Development of pathological Q waves **(NH1)**	MI
3. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality	MI
4. Intracoronary thrombus(applicable only for Type 1)	MI
None of the above	No MI

Table A1.2 Algorithm for Type 3 MI: death, no biomarkers

Death where symptoms suggestive of myocardial ischemia are present, and with (presumed) new ischemic changes or new LBBB on ECG, but where death occurs before cardiac biomarkers can be obtained or could rise or (in rare cases) were not collected.	**Fatal MI**

Table A1.3 Algorithm for Type 4 (PCI related) MI

Abnormal enzymes (troponin or CK-MB): Detection of > 5 x 99th%tile of URL or rise of cardiac biomarkers > 20% from baseline plus any ONE of the following, occurring within 48 hours of PCI	
1. Symptoms **of myocardial ischemia (i.e., chest pain)**	MI
2. ECG findings **(EPICARE CODE):** • New ischemic changes **(NH3 or NH4)** • New LBBB **(NH2)**	MI
3. Angiographic loss of patency, low flow, no flow, or embolization	MI
4. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality	MI
None of the above	**No MI**

Table A1.4 Algorithm for Type 5 (CABG related) MI

Abnormal enzymes (troponin or CK-MB): Elevation of cardiac enzymes >10 x 99th%tile of URL plus any ONE of the following, occurring within 48 hours of CABG surgery:	
1. ECG findings **(EPICARE CODE):** • Development of pathologic Q waves **(NH1)** • New LBBB **(NH2)**	MI
2. Angiographic new graft or native coronary occlusion	MI
3. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality	MI
None of the above	**No MI**

Table A2.2 – version 2. Revised ECG Classifications and Minnesota Code Criteria used by Epicare

New Label and description	Concept and permissible value definitions from Hicks 2015	H codes and corresponding Minnesota codes
NH1 **– New pathological Q Waves**	New (or presumed new) a) Q wave in leads V2 to V3 ≥0.02 s or QS complex in leads V2 and V3; b) Q wave≥0.03 s and $0.1 mV deep or QS complex in leads I, II, aVL, aVF, or V4 to V6 in any 2 leads of a contiguous lead grouping (I, aVL; V1 to V6; II, III, aVF; V7 to V9); or c) R wave ≥0.04 s in V1 to V2 and R/S ≥1 with a concordant positive T wave in the absence of a conduction defect.	Present H1-H2 (equal Q1-Q7), but require *serial comparison rules* which in MC book Chapter 15 from *page 224-228*
NH2 **– New LBBB**	New (or presumed new) LBBB pattern on ECG.	H2- Evolving Left Bundle Branch Block (equal E-BBB1)
NH3 **- ST-segment depression and/or T wave inversion**	In the absence of LVH and LBBB pattern (or other confounder such as a paced rhythm) on ECG, new (or presumed new) horizontal or downsloping ST-segment depression ≥0.05 mV in 2 contiguous leads and/or T inversion ≥0.1 mV in 2 contiguous leads with prominent R wave or R/S ratio >1	H3 --Major ST-T change (MC-4.1,4.2, MC-5.1, 5.2), and serial change equal ST1,ST2,ST3,ST4,ST6,ST7,ST8)
NH4 **ST-segment elevation only**	In the absence of LVH and LBBB pattern (or other confounder such as a paced rhythm) on ECG, new (or presumed new) ST elevation at the J point in 2 contiguous leads with the following cut points: ≥0.1 mV in all leads other than leads V2 to V3 where the following cut points apply: ≥0.2 mV in men≥40 y of age; ≥0.25 mV in men <40 y of age, or ≥0.15 mV in women;	
NH5**– No significant ecg finding,**		Any other codes
NH6 **–ECG absent or uncodable**		ECG Quality = 5 or Lead reversal Poor quality with 1 or 2 lead only