**Supplementary Table – ICD-9 Codes used**

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| **Groups** | **Diag. Code** | **Diagnosis Description** |
| **Structural valvular disease** | 3940 | MITRAL STENOSIS |
| 3949 | OTHER AND UNSPECIFIED MITRAL VALVE DISEASES |
| 3961 | MITRAL VALVE STENOSIS AND AORTIC VALVE INSUFFICIENCY |
| 3963 | MITRAL VALVE INSUFFICIENCY AND AORTIC VALVE INSUFFICIENCY |
| 3968 | MULTIPLE INVOLVEMENT OF MITRAL AND AORTIC VALVES |
| 3970 | DISEASES OF TRICUSPID VALVE |
| 4240 | MITRAL VALVE DISORDERS |
| 4241 | AORTIC VALVE DISORDERS |
| 4242 | TRICUSPID VALVE DISORDERS, SPECIFIED AS NONRHEUMATIC |
| 4243 | PULMONARY VALVE DISORDERS |
| **Hypertension** | 4019 | UNSPECIFIED ESSENTIAL HYPERTENSION |
| 4372 | HYPERTENSIVE ENCEPHALOPATHY |
| 40390 | UNSP. HYPERTENSIVE KIDNEY DIS. WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED |
| 40391 | UNSP. HYPERTENSIVE KIDNEY DIS. WITH CHRONIC KIDNEY DISEASE |
| 40391 | UNSP. HYPERTENSIVE KIDNEY DIS. WITH CHRONIC KIDNEY DISEASE STAGE V OR END STAGE RENAL DISEASE |
| 40391 | UNSP. HYPERTENSIVE RENAL DIS.+ RENAL FAILURE |
| 40591 | UNSPECIFIED RENOVASCULAR HYPERTENSION |
| **Arrhythmia** | 4260 | ATRIOVENTRICULAR BLOCK, COMPLETE |
| 4263 | OTHER LEFT BUNDLE BRANCH BLOCK |
| 4264 | RIGHT BUNDLE BRANCH BLOCK |
| 4267 | ANOMALOUS ATRIOVENTRICULAR EXCITATION |
| 4270 | PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA |
| 4271 | PAROXYSMAL VENTRICULAR TACHYCARDIA |
| 4272 | PAROXYSMAL TACHYCARDIA, UNSPECIFIED |
| 4273 | ATRIAL FIBRILLATION AND FLUTTER |
| 4275 | CARDIAC ARREST |
| 4279 | CARDIAC DYSRHYTHMIA, UNSPECIFIED |
| 7850 | TACHYCARDIA, UNSPECIFIED |
| 7851 | PALPITATIONS |
| 42611 | FIRST DEGREE ATRIOVENTRICULAR BLOCK |
| 42612 | MOBITZ (TYPE) II ATRIOVENTRICULAR BLOCK |
| 42613 | OTHER SECOND DEGREE ATRIOVENTRICULAR BLOCK |
| 42682 | LONG QT SYNDROME |
| 42689 | OTHER SPECIFIED CONDUCTION DISORDERS |
| 42731 | ATRIAL FIBRILLATION |
| 42732 | ATRIAL FLUTTER |
| 42741 | VENTRICULAR FIBRILLATION |
| 42760 | PREMATURE BEATS, UNSPECIFIED |
| 42761 | SUPRAVENTRICULAR PREMATURE BEATS |
| 42769 | OTHER PREMATURE BEATS |
| 42789 | OTHER SPECIFIED CARDIAC DYSRHYTHMIAS |
| 427811 | SINUS BRADYCARDIA |
| 4267 1 | WOLFF-PARKINSON-WHITE SYNDROME |
| **Rheumatic fever** | 390 | RHEUMATIC FEVER WITHOUT MENTION OF HEART INVOLVEMENT |
| 3911 | ACUTE RHEUMATIC ENDOCARDITIS |
| 3918 | OTHER ACUTE RHEUMATIC HEART DISEASE |
| 3919 | ACUTE RHEUMATIC HEART DISEASE, UNSPECIFIED |
| 3920 | RHEUMATIC CHOREA WITH HEART INVOLVEMENT |
| 3929 | RHEUMATIC CHOREA WITHOUT MENTION OF HEART INVOLVEMENT |
| 3941 | RHEUMATIC MITRAL INSUFFICIENCY |
| 3951 | RHEUMATIC AORTIC INSUFFICIENCY |
| 39890 | RHEUMATIC HEART DISEASE, UNSPECIFIED |
| **Ischemic heart disease** | 414 | OTHER FORMS OF CHRONIC ISCHEMIC HEART DISEASE |
| 4100 | ACUTE MYOCARDIAL INFARCTION OF ANTEROLATERAL WALL |
| 4109 | ACUTE MYOCARDIAL INFARCTION OF UNSPECIFIED SITE |
| 4111 | INTERMEDIATE CORONARY SYNDROME |
| 4149 | CHRONIC ISCHEMIC HEART DISEASE, UNSPECIFIED |
| 4292 | CARDIOVASCULAR DISEASE, UNSPECIFIED |
| 4295 | RUPTURE OF CHORDAE TENDINEAE |
| 41000 | AC. M.I. ANTEROLATERAL, EPISODE OF CARE UNSP. |
| 41011 | AC. M.I. OTHER ANTERIOR, INITIAL EPISODE OF CARE |
| 41071 | AC. M.I. SUBENDOCARDIAL, INITIAL EPISODE OF CARE |
| 41091 | AC. M.I. UNSP. SITE, INITIAL EPISODE OF CARE |
| 41410 | ANEURYSM OF HEART (WALL) |
| 42979 | OTHER, MURAL THROMBUS (ATR.)(VENT.)ACQUIRED,FOLLOWING M.I. |
| **Pulmonary heart disease** | 4160 | PRIMARY PULMONARY HYPERTENSION |
| 4168 | OTHER CHRONIC PULMONARY HEART DISEASES |
| 4169 | CHRONIC PULMONARY HEART DISEASE, UNSPECIFIED |
| 4171 | ANEURYSM OF PULMONARY ARTERY |
| 41512 | SEPTIC PULMONARY EMBOLISM |
| 41519 | OTHER PULMONARY EMBOLISM & INFARCTION |
| **Peri-, myo-, endo-carditis** | 4210 | ACUTE AND SUBACUTE BACTERIAL ENDOCARDITIS |
| 4211 | ACUTE + SUBACUTE INFEC.ENDOCARDITIS IN DIS.CLASS.ELSEWHERE |
| 4230 | HEMOPERICARDIUM |
| 4232 | CONSTRICTIVE PERICARDITIS |
| 4233 | CARDIAC TAMPONADE |
| 4238 | OTHER SPECIFIED DISEASES OF PERICARDIUM |
| 4239 | UNSPECIFIED DISEASE OF PERICARDIUM |
| 4251 | HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY |
| 4252 | OBSCURE CARDIOMYOPATHY OF AFRICA |
| 4253 | ENDOCARDIAL FIBROELASTOSIS |
| 4254 | OTHER PRIMARY CARDIOMYOPATHIES |
| 4257 | NUTRITIONAL AND METABOLIC CARDIOMYOPATHY |
| 4259 | SECONDARY CARDIOMYOPATHY, UNSPECIFIED |
| 4289 | HEART FAILURE, UNSPECIFIED |
| 4290 | MYOCARDITIS, UNSPECIFIED |
| 42090 | ACUTE PERICARDITIS, UNSPECIFIED |
| 42099 | OTHER ACUTE PERICARDITIS |
| 42290 | ACUTE MYOCARDITIS, UNSPECIFIED |
| 42291 | IDIOPATHIC MYOCARDITIS |
| 42292 | SEPTIC MYOCARDITIS |
| 42490 | ENDOCARDITIS, VALVE UNSPECIFIED, UNSPECIFIED CAUSE |
| **Heart failure** | 4280 | CONGESTIVE HEART FAILURE |
| 4280 | CONGESTIVE HEART FAILURE, UNSPECIFIED |
| 4281 | LEFT HEART FAILURE |
| 42841 | ACUTE COMBINED SYSTOLIC AND DIASTOLIC HEART FAILURE |
| **Heart disease NOS** | 4299 | HEART DISEASE, UNSPECIFIED |
| 9971 | CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED |
| 42989 | OTHER ILL-DEFINED HEART DISEASES |
| **Other** | 7852 | FUNCTIONAL AND UNDIAGNOSED CARDIAC MURMURS |
| 7852 | UNDIAGNOSED CARDIAC MURMURS,(HEART MURMUR NOS) |
| 7859 | OTHER SYMPTOMS INVOLVING CARDIOVASCULAR SYSTEM |
| 7852 1 | SYSTOLIC MURMUR |