GlobalHealth	LINE(S) OF BUSINESS Commercial	NUMBER GH-SUR-004	
	TITLE Implantable Cardioverter-Defibrillator	FORMER NUMBER	
	EFFECTIVE DATE 09/01/2019	REVIEW CYCLE Annual	LAST REVISED 01/01/2020

1.0 CRITERIA

GlobalHealth considers placement of an Implantable Cardioverter-Defibrillator (ICD) medically necessary for all of the following:

1.1 Member has a cardiac condition that requires ICD placement as indicated by any of the following:

1.1.1 Member has a personal history of sustained Ventricular Tachyarrhythmias (VT) or cardiac arrest due to Ventricular Fibrillation (VF) and has demonstrated all the following:

1.1.1.1 An episode of sustained VT, either spontaneous or induced by and electrophysiology (EP) study, not associate with an acute myocardial infarction (MI) and not due to a transient or reversible cause.

1.1.1.2 An episode of cardiac arrest due to VF, not due to a transient or reversible cause.

1.1.2 Member had a prior MI and a measured left ventricular ejection fraction (LVEF)* ≤ 30% and all the following:

1.1.2.1 No New York Heart Association (NYHA) classification IV heart failure

1.1.2.2 No Coronary artery bypass graft (CABG), or percutaneous coronary intervention (PCI) with angioplasty and/or stenting within the past 3 months

1.1.2.3 No MI within the past 40 days

1.1.2.4 No Clinical symptoms and findings that would make member a candidate for coronary revascularization

1.1.3 Member has severe ischemic dilated cardiomyopathy but no personal history of sustained VT or cardiac arrest due to VF, and all the following:

1.1.3.1 NYHA Class II or III heart failure,

1.1.3.2 LVEF ≤ 35%

1.1.3.3 No CABG or PCI with angioplasty and/or stenting within the past 3 months

1.1.3.4 No MI within the past 40 days

1.1.3.5 No Clinical symptoms and findings that would make member a candidate for coronary revascularization

1.1.4 Member has severe non-ischemic dilated cardiomyopathy without personal history of cardiac arrest or sustained VT and all of the following:

1.1.4.1 NYHA Class II or III heart failure

1.1.4.2 LVEF ≤ 35%

1.1.4.3 Optimal medical therapy** for at least 3 months

1.1.4.4 No CABG or PCI with angioplasty and/or stenting within the past 3 months

1.1.4.5 No MI within the past 40 days

1.1.4.6 No clinical symptoms and findings that would make member a candidate for coronary revascularization

1.1.5 Member has documented familial or genetic disorders with a high risk of life threatening tachyarrhythmias (sustained VT or VF), including any of the following:

1.1.5.1 Long QT syndrome and 1 or more of the following:

1.1.5.1.1 History of cardiac arrest

1.1.5.1.2 Corrected QT interval greater than 500 milliseconds while receiving beta-blocker

1.1.5.1.3 Beta-blocker therapy ineffective or not tolerated

1.1.5.1.4 Syncope presumed to be due to ventricular arrhythmia

1.1.5.1.5 Genotypes LQT2 or LQT3

1.1.5.1.6 Age younger than 40 years

1.1.5.1.7 Onset of symptoms at age younger than 10 years

1.1.5.2 Hypertrophic cardiomyopathy and 1 or more of the following:

1.1.5.2.1 Ventricular tachycardia that is sustained (lasting longer than 30 seconds) or hemodynamically significant

1.1.5.2.2 Syncope presumably due to ventricular arrhythmia

1.1.5.2.3 Maximum left ventricle wall thickness of 30mm or greater

1.1.5.2.4 Family history of sudden death due to ventricular arrhythmia, presumably caused by hypertrophic cardiomyopathy

1.1.5.2.5 Non-sustained ventricular tachycardia and 1 or more of the following:

1.1.5.2.5.1 Age younger than 30 years

1.1.5.2.5.2 Late gadolinium enhancement on cardiac MRI

1.1.5.2.5.3 Left ventricular outflow tract obstruction

1.1.5.2.5.4 Left ventricular aneurysm

1.1.5.2.6 Abnormal blood pressure response to exercise (20mm Hg decrease in blood pressure, or failure to increase blood pressure by 20mm Hg during exertion) and 1 or more of the following:

1.1.5.2.6.1 Age younger than 30 years

1.1.5.2.6.2 Late gadolinium enhancement on cardiac MRI

1.1.5.2.6.3 Left ventricular outflow tract obstruction

1.1.5.2.6.4 Left ventricular aneurysm

1.1.5.3 Brugada syndrome and 1 or more of the following:

1.1.5.3.1 Spontaneous type 1 Brugada syndrome ECG pattern and 1 or more of the following:

1.1.5.3.1.1 Sustained (lasting 30 seconds or longer) of hemodynamically significant ventricular tachycardia

1.1.5.3.1.2 Inducible sustained ventricular tachycardia

1.1.5.3.1.3 History of cardia crest

1.1.5.3.1.4 Syncope presumed to be due to ventricular arrhythmia

1.1.5.3.2 Member with other than spontaneous type 1 Brugada syndrome ECG pattern with response to pharmacologic challenge of 1 or more of the following:

1.1.5.3.2.1 Ventricular arrhythmia

1.1.5.3.2.2 Marked QRS widening

1.1.5.3.2.3 Type 1 Brugada syndrome ECG pattern

1.1.5.4 Catecholaminergic polymorphic ventricular tachycardia and 1 or more of the following:

1.1.5.4.1 Sustained (lasting longer than 30 seconds) ventricular tachycardia while receiving beta-blocker therapy

1.1.5.4.2 Syncope presumed to be due to a ventricular arrhythmia while receiving beta-blocker therapy

1.1.5.5 Other familial cardiomyopathy associated with sudden death

1.1.6 Member with an existing ICD may receive and ICD replacement if required by any of the following:

1.1.6.1 End of battery life

1.1.6.2 Elective replacement indicator (ERI)

1.1.6.3 Device/lead malfunction

1.1.7 Member with NYHD Class IV and 1 or more of the following:

1.1.7.1 Heart transplant candidate

1.1.7.2 LVAD candidate or implanted

1.1.7.3 Cardiac resynchronization therapy candidate

1.1.8 Member meets medical necessity requirements for cardiac pacemaker and criteria for ICD placement in 1.1.1–1.1.5 above may receive combined devices in one procedure at the time the pacemaker is clinically indicated regardless of the waiting periods listed.

1.2 Member is without contraindication to ICD placement as indicated by all of the following:

1.2.1 No significant, irreversible brain damage

1.2.2 Absence of a terminal illness and life expectancy greater than 1 year (example: cancer, renal failure, liver failure).

1.2.3 No supraventricular tachycardia such as atrial fibrillation with a poorly controlled ventricular rate.

1.2.4 No significant psychiatric illness that may be aggravated by device implantation or that may preclude regular follow-up

1.2.5 No ongoing IV drug abuse

1.2.6 No unresolved infection associated with risk for hematogenous seeding

1.2.7 No history of significant nonadherence with medical therapy and follow-up

NOTE:
*LVEF must be measured by echocardiography, radionuclide (nuclear medicine) imaging, cardiac Magnetic Resonance Imaging (MRI), or catheter angiography.
**Optimal medical therapy is considered use of or documented contraindication to ACE Inhibitor, Beta-blocker, Statin, and Loop Diuretic.

2.0 RESOURCES

2.1 Al-Khatib, S.M., Stevenson, W.G., Ackerman, M.J., et al. (2018). 2017 AHA/ACC/HRS Guideline for Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death. Circulation 138: e272-e391. Retrieved from www.ahajournals.org

2.2 Kusumoto, F.M., Calkins, H., Boehmer, J., et al. (2014). HRS/ACC/AHA Expert Consensus Statement on the Use of Implantable Cardioverter-Defibrillator Therapy in Patients Who are Not Included or Not Well Represented in Clinical Trials. Circulation 130: 94-125. Retrieved from www.ahajournals.org

2.3 Dunbar, S.B., Dougherty, C.., Sears, S.F., et al. (2012). Educational and Psychological Interventions to Improve Outcomes for Recipients of Implatable Cardioverter Defribillators and Their Families. Circulation 126: 2146-2172. Retrieved from www.ahajournals.org

2.4 Xing, Z., Tang, L., Chen, C., et al. (2017). Effectiveness of Implantation of Cardioverter-Defibrillators Therapy in Patients with Non-Ischemic Heart Failure: an Updated Systematic Review and Meta-Analysis. Brazilian Journal of Cardiovascular Surgery 32 (5): 417-422.

2.5 El Moheb M., Nicolas J., Khamis A.M., et al. Implantable cardiac defibrillators for people with non -ischaemic cardiomyopathy. Cochrane Database of Systematic Reviews 2018, Issue 12. Art. No.: CD012738. DOI: 10.1002/14651858.CD012738.pub2.

2.6 MCG Care Guideline M-157. Electrophysiologic Study and Implantable Cardioverter-Defibrillator (ICD) Insertion. (23rd Edition).

2.7 Centers for Medicare & Medicaid Services (CMS) Decision Memo for Implantable Cardioverter Defibrillators (CAG-00157R4)

3.0 CPT CODES COVERED IF CRITERIA MET

3.1 33216 – Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator

3.2 33217 – Insertion of 2 transvenous electrodes, permanent pacemaker or implantable defibrillator

4.0 POLICY REVIEW AND REVISION HISTORY

Date	Action/Description of Change
January 2020	Reviewed – No Changes

5.0 SCOPE

This policy applies to Commercial lines of business within GlobalHealth Holdings, LLC.