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Subject: Genetic Testing: Long QT Syndrome (LQTS)  
Effective Date: January 30, 2008

Clinical Documentation and Prior Authorization Required	√	Type of Review - Case Management	
Not Covered		Type of Review – Precertification Department	√
		Administrative Process (Internal Use Only)	LPN

**Note:** Background, product, and disclaimer information is located at the end of this document.

### Overview

The QT wave is a segment of an electrical representation of a person's heartbeat as seen on an electrocardiogram (ECG or EKG). Long QT Syndrome is a syndrome characterized by history of syncopal episodes and a long QT interval, sometimes leading to sudden death due to paroxysmal ventricular arrhythmia. Forms of this disease include Jervell-Lange Nielsen Syndrome and Romano-Ward Syndrome (Genetics Home Reference, 2007).

### Coverage Guidelines

Tufts Health Plan may authorize coverage of genetic testing for Long QT Syndrome if either of the following criteria is met:

- The Member has a prolonged QT interval on resting electrocardiogram or Holter monitor and evaluation by a cardiologist has not identified any causative factors.
- The Member has a first degree relative, i.e., parents, siblings and offspring only, with one of the following:
  - Diagnosis of LQTS
  - Known LQT associated mutation

### Limitations

Testing must be performed by at a contracting laboratory facility when available.

### Codes

The following HCPCS/CPT code(s) require prior authorization for this testing:

Code	Description
83890	Molecular diagnostics; molecular isolation or extraction
83891	Molecular diagnostics; isolation or extraction of highly purified nucleic acid
83892	Molecular diagnostics; enzymatic digestion
83893	Molecular diagnostics; dot/slot blot production
83894	Molecular diagnostics; separation by gel electrophoresis (eg, agarose, polyacrylamide)
83896	Molecular diagnostics; nucleic acid probe, each

Code	Description
83897	Molecular diagnostics; nucleic acid transfer (eg, Southern, Northern)
83898	Molecular diagnostics; amplification of patient nucleic acid, each nucleic acid sequence
83900	Molecular diagnostics; amplification of patient nucleic acid, multiplex, first two nucleic acid sequences
83901	Molecular diagnostics; amplification of patient nucleic acid, multiplex, each additional nucleic acid sequence
83902	Molecular diagnostics; reverse transcription
83903	Molecular diagnostics; mutation scanning, by physical properties (eg, single strand conformational polymorphisms (SSCP), heteroduplex, denaturing gradient gel electrophoresis (DGGE), RNA'ase A), single segment, each
83904	Molecular diagnostics; mutation identification by sequencing, single segment, each segment
83905	Molecular diagnostics; mutation identification by allele specific transcription, single segment, each segment
83906	Molecular diagnostics; mutation identification by allele specific translation, single segment, each segment
83912	Molecular diagnostics; interpretation and report

## References

1. U.S. National Library of Medicine. Long QT syndrome. Genetics Home Reference. Retrieved on January 3, 2007 from: <http://ghr.nlm.nih.gov/ghr/glossary/longqtsyndrome>

## Approval History

Reviewed by the Clinical Coverage Criteria Committee on February 1, 2007.

Subsequent Endorsement Date(s) and Changes Made:

- January 30, 2008: Reviewed and renewed without changes.

## Background, Product and Disclaimer Information

Medical Necessity Guidelines are developed to determine coverage for Tufts Health Plan benefits, and are published to provide a better understanding of the basis upon which coverage decisions are made. Tufts Health Plan makes coverage decisions using these guidelines, along with the Member's benefit document, and in coordination with the Member's physician(s) on a case-by-case basis considering the individual Member's health care needs.

Medical Necessity Guidelines are developed for selected therapeutic or diagnostic services found to be safe, but proven effective in a limited, defined population of patients or clinical circumstances. They include concise clinical coverage criteria based on current literature review, consultation with practicing physicians in the Tufts Health Plan service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations. Tufts Health Plan revises and updates Medical Necessity Guidelines annually, or more frequently if new evidence becomes available that suggests needed revisions.

Medical Necessity Guidelines apply to all fully insured Tufts Health Plan products unless otherwise noted in this guideline or the Member's benefit document. This guideline does not apply to Tufts Health Plan Medicare Preferred or to certain delegated service arrangements. For self-insured plans, coverage may vary depending on the terms of the benefit document. If a discrepancy exists between a Medical Necessity Guideline and a self-insured Member's benefit document, the provisions of the benefit document will govern. Applicable state or federal mandates will take precedence. Providers in the New Hampshire service area are subject to CIGNA HealthCare's provider arrangement for the purpose of CareLink<sup>SM</sup>.

Treating providers are solely responsible for the medical advice and treatment of Members. The use of this guideline is not a guarantee of payment or a final prediction of how specific claim(s) will be adjudicated. Claims payment is subject to eligibility and benefits on the date of service, coordination of benefits, referral/authorization, utilization management guidelines when applicable, and adherence to plan policies, plan procedures, and claims editing logic.