I. Policy: Quantitative EEG (QEEG)

II. Purpose/Objective:
To provide a policy of coverage regarding Quantitative EEG (QEEG)

III. Responsibility:
A. Medical Directors
B. Medical Management

IV. Required Definitions
1. Attachment – a supporting document that is developed and maintained by the policy writer or department requiring/authoring the policy.
2. Exhibit – a supporting document developed and maintained in a department other than the department requiring/authoring the policy.
3. Devised – the date the policy was implemented.
4. Revised – the date of every revision to the policy, including typographical and grammatical changes.
5. Reviewed – the date documenting the annual review if the policy has no revisions necessary.

V. Additional Definitions
Medical Necessity or Medically Necessary means Covered Services rendered by a Health Care Provider that the Plan determines are:

a. appropriate for the symptoms and diagnosis or treatment of the Member's condition, illness, disease or injury;
b. provided for the diagnosis, and the direct care and treatment of the Member's condition, illness disease or injury;
c. in accordance with current standards of good medical treatment practiced by the general medical community.
d. not primarily for the convenience of the Member, or the Member's Health Care Provider; and
e. the most appropriate source or level of service that can safely be provided to the Member. When applied to hospitalization, this further means that the Member requires acute care as an inpatient due to the nature of the services rendered or the Member's condition, and the Member cannot receive safe or adequate care as an outpatient.

Medicaid Business Segment
Medical Necessity shall mean a service or benefit that is compensable under the Medical Assistance Program and if it meets any one of the following standards:

(i) The service or benefit will, or is reasonably expected to, prevent the onset of an illness, condition or disability.
(ii) The service or benefit will, or is reasonably expected to, reduce or ameliorate the physical, mental or development effects of an illness, condition, injury or disability.
(iii) The service or benefit will assist the Member to achieve or maintain maximum functional capacity in performing daily activities, taking into account both the functional capacity of the Member and those functional capacities that are appropriate for members of the same age.
DESCRIPTION:
A quantitative electroencephalogram (QEEG) is a technique for topographic visual enhancement of traditional surface EEG electrophysiological data. The process transforms the surface EEG data into a topographic image of the brain activity. The activity data is algorithmically analyzed by amplitude, frequency and locality and placed onto a schematic map of the brain. The data is then compared to a database of normal patient brainwave activity to determine specific seizure types, location of seizure activity or abnormal discharges, or underlying medical conditions.

INDICATIONS: Quantitative electroencephalography, when used by physicians highly skilled in clinical EEG, and only as an adjunct to and in conjunction with traditional EEG interpretation, may be considered medically necessary for the following indications:

- Topographical localization and amplitude analysis in pre-surgical evaluations of intractable epilepsy; or
- Continuous EEG frequency-trend monitoring for early detection of acute intracranial complications in the operating room during cerebrovascular surgery such as intracranial or carotid endarterectomy; or
- Detection of non-convulsive seizures in high-risk individuals in the intensive care setting; or
- As an adjunct to confirm diagnostic symptoms of cerebral vascular disease or encephalopathy when routine neurological imaging and routine EEG outcomes are inconclusive; or
- To aid in the detection of possible epileptogenic activity when routine surface EEG and long-term EEG monitoring is inconclusive and additional testing is needed to diagnose episodes of behavior suspicious for seizures.

EXCLUSIONS: In accordance with the American Academy of Neurology / American Clinical Neurophysiology Society's report, and due to insufficient evidence in the peer reviewed, published, medical literature to support a definitive role outside of a research setting, quantitative EEG is considered to be experimental, investigational or unproven and is NOT COVERED for the diagnosis or treatment of conditions included but not limited to:

- Depression
- Schizophrenia
- Prediction of psychotropic medication response
- Alcoholism
- Drug abuse
- Learning disabilities
- Attention deficit disorders
- Mild to moderate head injury
- Post-concussive syndrome
- Tinnitus
- Asperger syndrome and other autism spectrum disorders
- Fibromyalgia
- Hypoxic ischemic encephalopathy
- Insomnia
- Panic disorder
- Parkinson's disease

Note: A complete description of the process by which a given technology or service is evaluated and determined to be experimental, investigational or unproven is outlined in MP 15 - Experimental Investigational or Unproven Services or Treatment.

CODING ASSOCIATED WITH: Quantitative EEG (QEEG)
The following codes are included below for informational purposes and may not be all inclusive. Inclusion of a procedure or device code(s) does not constitute or imply coverage nor does it imply or guarantee provider reimbursement. Coverage is determined by the member specific benefit plan document and any applicable laws regarding coverage of specific services. Please note that per Medicare coverage rules, only specific CPT/HCPCS Codes may be covered for the Medicare Business Segment. Please consult the CMS website at www.cms.gov or the local Medicare Administrative Carrier (MAC) for more information on Medicare coverage and coding requirements.

95955 – Electroencephalogram (EEG) during non-intracranial surgery (eg, carotid surgery)
95957 – Digital analysis of electroencephalogram
95961 – Functional cortical and subcortical mapping by stimulation and/or recording of electrodes on brain surface, or of depth electrodes, to provoke seizures or identify vital brain structures; initial
hour of physician attendance
95962 - each additional hour of physician attendance
S8040 – Topographic brain mapping


LINE OF BUSINESS:
Eligibility and contract specific benefits, limitations and/or exclusions will apply. Coverage statements found in the line of business specific benefit document will supersede this policy. For Medicare, applicable LCD’s and NCD’s will supersede this policy. For PA Medicaid Business segment, this policy applies as written.

REFERENCES:


Duff J. The Usefulness of Quantitative EEG (QEEG) and Neurotherapy in the assessment and treatment of post-concussive syndrome. Clinical EEG and Neuroscience 2004;35(4):198-209.


This policy will be revised as necessary and reviewed no less than annually.

**Devised:** 7/08

**Revised:** 6/12 (Added Exclusions)

**Reviewed:** 7/09, 7/10, 6/11, 6/13, 6/14; 5/15, 5/16, 5/17, 5/18, 5/19, 5/20, 5/21

Geisinger Health Plan may refer collectively to health care coverage sponsors Geisinger Health Plan, Geisinger Quality Options, Inc., and Geisinger Indemnity Insurance Company, unless otherwise noted. Geisinger Health Plan is part of Geisinger, an integrated health care delivery and coverage organization.

Coverage for experimental or investigational treatments, services and procedures is specifically excluded under the member's certificate with Geisinger Health Plan. Unproven services outside of an approved clinical trial are also specifically excluded under the member's certificate with Geisinger Health Plan. This policy does not expand coverage to services or items specifically excluded from coverage in the member's certificate with Geisinger Health Plan. Additional information can be found in MP015 Experimental, Investigational or Unproven Services.

Prior authorization and/or pre-certification requirements for services or items may apply. Pre-certification lists may be found in the member's contract specific benefit document. Prior authorization requirements can be found at https://www.geisinger.org/health-plan/providers/ghp-clinical-policies

Please be advised that the use of the logos, service marks or names of Geisinger Health Plan, Geisinger Quality Options, Inc. and Geisinger Indemnity Insurance Company on a marketing, press releases or any communication piece regarding the contents of this medical policy is strictly prohibited without the prior written consent of Geisinger Health Plan. Additionally, the above medical policy does not confer any endorsement by Geisinger Health Plan, Geisinger Quality Options, Inc. and Geisinger Indemnity Insurance Company regarding the medical service, medical device or medical lab test described under this medical policy.