MEDICAL POLICY

POLICY TITLE	COGNITIVE REHABILITATION
POLICY NUMBER	MP-8.007

Effective Date:	11/1/2023

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I. POLICY

Cognitive rehabilitation may be considered **medically necessary** when all of the following are met:

- The member:
  - has documented potential for improvement; **and**
  - is able to actively participate in the program; **and**
  - requires treatment of cognitive deficits acquired as a result of neurologic impairment due to documented traumatic brain injury, stroke, or encephalopathy; **and**
- Cognitive rehabilitation is:
  - Performed as a distinct and definable treatment; **and**
  - Prescribed and monitored by a qualified licensed professional; **and**
  - Documented as part of a written care plan.

Cognitive rehabilitation (as a distinct and definable component of the rehabilitation process) is considered **investigational** for all other applications. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure for these indications.

Policy Guidelines

According to the National Institute of Neurological Disorders and Stroke (NINDS), "Encephalopathy is a term for any diffuse disease of the brain that alters brain function or structure. Encephalopathy may be caused by infectious agent (bacteria, virus, or prion), metabolic or mitochondrial dysfunction, brain tumor or increased pressure in the skull, prolonged exposure to toxic elements (including solvents, drugs, radiation, paints, industrial chemicals, and certain metals), chronic progressive trauma, poor nutrition, or lack of oxygen or blood flow to the brain. The hallmark of encephalopathy is an altered mental state. Depending on the type and severity of encephalopathy, common neurological symptoms are progressive loss of memory and cognitive ability, subtle personality changes, inability to concentrate, lethargy, and progressive loss of consciousness. Other neurological symptoms may include myoclonus (involuntary twitching of a muscle or group of muscles), nystagmus (rapid, involuntary eye movement), tremor, muscle atrophy and weakness, dementia, seizures, and loss of ability to swallow or speak."

Cognitive rehabilitation may be performed in addition to other types of rehabilitative therapies.

Active participation requires sufficient cognitive function to understand and participate in the program, as well as adequate language expression and comprehension, (i.e., participants should not have severe aphasia.) Ongoing services are considered necessary only when there is demonstrated continued objective improvement in function.

Duration and intensity of cognitive rehabilitation therapy programs vary. One approach for comprehensive cognitive rehabilitation is a 16-week outpatient program comprising 5 hours of therapy daily for 4 days each week. In another approach, cognitive group treatment occurs for three 2-hour sessions weekly and three 1-hour individual sessions (total, 9 hours weekly). Cognitive rehabilitation programs for specific deficits (e.g., memory training) are less intensive and generally have 1 or 2 sessions (30 or 60 minutes) a week for 4 to 10 weeks.

Cross-references:

MP 2.304 Autism Spectrum Disorders

MP 2.380 Diagnosis and Treatment of Post-Acute Sequelae Covid (PASC)

MP 8.011 Sensory Integration and Auditory Integration Therapy

II. PRODUCT VARIATIONS

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This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations as discussed in Section VI. Please see additional information below.

FEP PPO - Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at:

https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies

III. DESCRIPTION/BACKGROUND

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Cognitive rehabilitation is a therapeutic approach designed to improve cognitive functioning after central nervous system insult. It includes an assembly of therapy methods that retrain or alleviate problems caused by deficits in attention, visual processing, language, memory, reasoning, problem-solving, and executive functions. Cognitive rehabilitation comprises tasks to reinforce or reestablish previously learned patterns of behavior or to establish new compensatory mechanisms for impaired neurologic systems. Cognitive rehabilitation may be performed by a physician, psychologist, or a physical, occupational, or speech therapist.

Cognitive rehabilitation is a structured set of therapeutic activities designed to retrain an individual's ability to think, use judgment, and make decisions. The focus is on improving deficits in memory, attention, perception, learning, planning, and judgment. The term *cognitive rehabilitation* is applied to various intervention strategies or techniques that attempt to help patients reduce, manage, or cope with cognitive deficits caused by brain injury. The desired outcomes are improved quality of life and function in home and community life. The term *rehabilitation* broadly encompasses reentry into familial, social, educational, and working environments, the reduction of dependence on assistive devices or services, and general enrichment of quality of life. Patients recuperating from traumatic brain injury have

traditionally been treated with some combination of physical therapy, occupational therapy, and psychological services as indicated. Cognitive rehabilitation is considered a separate service from other rehabilitative therapies, with its own specific procedures.

Cognitive rehabilitation must be distinguished from occupational therapy. Occupational therapy describes rehabilitation that is directed at specific environments (i.e., home or work). In contrast, cognitive rehabilitation consists of tasks designed to develop the memory, language, and reasoning skills that can then be applied to specific environments.

Sensory integrative therapy may be considered a component of cognitive rehabilitation. However, sensory integration therapy is considered separately in MP 8.011 Sensory Integration and Auditory Integration Therapy.

IV. RATIONALE

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Summary of Evidence

For individuals who have cognitive deficits due to traumatic brain injury who receive cognitive rehabilitation delivered by a qualified professional, the evidence includes randomized controlled trials (RCTs), nonrandomized comparison studies, case series, and systematic reviews. Relevant outcomes are functional outcomes and quality of life. The cognitive rehabilitation trials have methodologic limitations and have reported mixed results, indicating there is no uniform or consistent evidence base supporting the efficacy of this technique. Systematic reviews have generally concluded that efficacy of cognitive rehabilitation is uncertain. Clinical input obtained in 2010 provided the strongest support for the use of cognitive rehabilitation as part of the treatment of traumatic brain injuries. As part of clinical input obtained in 2015, the American Association of Physical Medicine & Rehabilitation reasserted its position of support. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have cognitive deficits due to dementia who receive cognitive rehabilitation delivered by a qualified professional, the evidence includes RCTs, nonrandomized comparison studies, case series, and systematic reviews. Relevant outcomes are functional outcomes and quality of life. Systematic reviews of RCTs have generally shown no benefit of cognitive rehabilitation or effects of clinical importance. One large RCT evaluating a goal-oriented cognitive rehabilitation program reported a significantly less functional decline in 1 of 2 functional scales and lower rates of institutionalization in the cognitive rehabilitation group compared with usual care at 24 months. These results need replication.

For individuals who have cognitive deficits due to stroke who receive cognitive rehabilitation delivered by a qualified professional, the evidence includes RCTs and systematic reviews. Relevant outcomes are functional outcomes and quality of life. A Cochrane review of 6 RCTs found a benefit of cognitive rehabilitation after stroke on some aspects of attention deficits at the end of the treatment period. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have cognitive deficits due to multiple sclerosis (MS) who receive cognitive rehabilitation delivered by a qualified professional, the evidence includes RCTs and systematic reviews. Relevant outcomes are functional outcomes and quality of life. Systematic reviews of

RCTs have shown no significant effects of cognitive rehabilitation on cognitive outcomes. Although numerous RCTs have investigated cognitive rehabilitation for MS, high-quality trials are lacking. The ability to draw conclusions based on the overall body of evidence is limited by the heterogeneity of patient samples, interventions, and outcome measures. Further, results of the available RCTs have been mixed, with positive studies mostly reporting short-term benefits. Evidence for clinically significant, durable improvements in cognition is currently lacking. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have cognitive deficits due to epilepsy, autism spectrum disorder, or cancer who receive cognitive rehabilitation delivered by a qualified professional, the evidence includes RCTs, nonrandomized comparison studies, and case series. Relevant outcomes are functional outcomes and quality of life. The quantity of studies for these conditions is much less than that for the other cognitive rehabilitation indications. Systematic reviews generally have not supported the efficacy of cognitive rehabilitation for these conditions. Relevant RCTs have had methodologic limitations, most often very short lengths of follow-up, which do not permit strong conclusions about efficacy. The evidence is insufficient to determine the effects of the technology on health outcomes.

V. DEFINITIONS

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Cognitive pertains to the mental processes of comprehension, judgment, memory, and reasoning, as contrasted with emotional and volitional process.

Encephalopathy refers to generalized (i.e., not localized) brain dysfunction marked by varying degrees of impairment of speech, cognition, orientation, and arousal.

VI. BENEFIT VARIATIONS

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The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member's health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits and which require preauthorization. There are different benefit plan designs in each product administered by Capital Blue Cross. Members and providers should consult the member's health benefit plan for information or contact Capital Blue Cross for benefit information.

VII. DISCLAIMER

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Capital Blue Cross's medical policies are developed to assist in administering a member's benefits, do not constitute medical advice, and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member's plan of benefits, please contact Capital Blue Cross' Provider Services or Member Services. Capital Blue Cross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.

VIII. CODING INFORMATION

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Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Covered when medically necessary:

Procedure Codes								
97129	97130							

ICD-10-CM Diagnosis Codes	Description
I69.010	Attention and concentration deficit following nontraumatic subarachnoid hemorrhage
I69.011	Memory deficit following nontraumatic subarachnoid hemorrhage
I69.012	Visuospatial deficit and spatial neglect following nontraumatic subarachnoid hemorrhage
I69.013	Psychomotor deficit following nontraumatic subarachnoid hemorrhage
I69.014	Frontal lobe and executive function deficit following nontraumatic subarachnoid hemorrhage
I69.015	Cognitive social or emotional deficit following nontraumatic subarachnoid hemorrhage
I69.018	Other symptoms and signs involving cognitive functions following nontraumatic subarachnoid hemorrhage
I69.110	Attention and concentration deficit following nontraumatic intracerebral hemorrhage
I69.111	Memory deficit following nontraumatic intracerebral hemorrhage
I69.112	Visuospatial deficit and spatial neglect following nontraumatic intracerebral hemorrhage
I69.113	Psychomotor deficit following nontraumatic intracerebral hemorrhage
I69.114	Frontal lobe and executive function deficit following nontraumatic intracerebral hemorrhage
I69.115	Cognitive social or emotional deficit following nontraumatic intracerebral hemorrhage
I69.118	Other symptoms and signs involving cognitive functions following nontraumatic intracerebral hemorrhage
I69.210	Attention and concentration deficit following other nontraumatic intracranial hemorrhage
I69.211	Memory deficit following other nontraumatic intracranial hemorrhage
I69.212	Visuospatial deficit and spatial neglect following other nontraumatic intracranial

ICD-10-CM Diagnosis Codes	Description
	hemorrhage
I69.213	Psychomotor deficit following other nontraumatic intracranial hemorrhage
I69.214	Frontal lobe and executive function deficit following other nontraumatic intracranial hemorrhage
I69.215	Cognitive social or emotional deficit following other nontraumatic intracranial hemorrhage
I69.218	Other symptoms and signs involving cognitive functions following other nontraumatic intracranial hemorrhage
I69.310	Attention and concentration deficit following cerebral infarction
I69.311	Memory deficit following cerebral infarction
I69.312	Visuospatial deficit and spatial neglect following cerebral infarction
I69.313	Psychomotor deficit following cerebral infarction
I69.314	Frontal lobe and executive function deficit following cerebral infarction
I69.315	Cognitive social or emotional deficit following cerebral infarction
I69.318	Other symptoms and signs involving cognitive functions following cerebral infarction
I69.810	Attention and concentration deficit following other cerebrovascular disease
I69.811	Memory deficit following other cerebrovascular disease
I69.812	Visuospatial deficit and spatial neglect following other cerebrovascular disease
I69.813	Psychomotor deficit following other cerebrovascular disease
I69.814	Frontal lobe and executive function deficit following other cerebrovascular disease
I69.815	Cognitive social or emotional deficit following other cerebrovascular disease
I69.818	Other symptoms and signs involving cognitive functions following other cerebrovascular disease
R41.840	Attention and concentration deficit
R41.841	Cognitive communication deficit
R41.842	Visuospatial deficit
R41.843	Psychomotor deficit
R41.844	Frontal lobe and executive function deficit
R41.89	Other symptoms and signs involving cognitive functions and awareness
S06.0X0S	Concussion without loss of consciousness, sequela
S06.0X1S	Concussion with loss of consciousness of 30 minutes or less, sequela
S06.0X9S	Concussion with loss of consciousness of unspecified duration, sequela
S06.0XAS	Concussion with loss of consciousness status unknown, sequela
S06.1X0S	Traumatic cerebral edema without loss of consciousness, sequela
S06.1X1S	Traumatic cerebral edema with loss of consciousness of 30 minutes or less,

ICD-10-CM Diagnosis Codes	Description
	sequela
S06.1X2S	Traumatic cerebral edema with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.1X3S	Traumatic cerebral edema with loss of consciousness of 1 hour to 5 hours 59 minutes, sequela
S06.1X4S	Traumatic cerebral edema with loss of consciousness of 6 hours to 24 hours, sequela
S06.1X5S	Traumatic cerebral edema with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.1X9S	Traumatic cerebral edema with loss of consciousness of unspecified duration, sequela
S06.1XAS	Traumatic cerebral edema with loss of consciousness status unknown, sequela
S06.2X0S	Diffuse traumatic brain injury without loss of consciousness, sequela
S06.2X1S	Diffuse traumatic brain injury with loss of consciousness of 30 minutes or less, sequela
S06.2X2S	Diffuse traumatic brain injury with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.2X3S	Diffuse traumatic brain injury with loss of consciousness of 1 hour to 5 hours 59 minutes, sequela
S06.2X4S	Diffuse traumatic brain injury with loss of consciousness of 6 hours to 24 hours, sequela
S06.2X5S	Diffuse traumatic brain injury with loss of consciousness greater than 24 hours with return to pre-existing conscious levels, sequela
S06.2X9S	Diffuse traumatic brain injury with loss of consciousness of unspecified duration, sequela
S06.2XAS	Diffuse traumatic brain injury with loss of consciousness status unknown, sequela
S06.300S	Unspecified focal traumatic brain injury without loss of consciousness, sequela
S06.301S	Unspecified focal traumatic brain injury with loss of consciousness of 30 minutes or less, sequela
S06.302S	Unspecified focal traumatic brain injury with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.303S	Unspecified focal traumatic brain injury with loss of consciousness of 1 hour to 5 hours 59 minutes, sequela
S06.304S	Unspecified focal traumatic brain injury with loss of consciousness of 6 hours to 24 hours, sequela
S06.305S	Unspecified focal traumatic brain injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.309S	Unspecified focal traumatic brain injury with loss of consciousness of unspecified duration, sequela
S06.30AS	Unspecified focal traumatic brain injury with loss of consciousness status

ICD-10-CM Diagnosis Codes	Description
	unknown, sequela
S06.340S	Traumatic hemorrhage of right cerebrum without loss of consciousness, sequela
S06.341S	Traumatic hemorrhage of right cerebrum with loss of consciousness of 30 minutes or less, sequela
S06.342S	Traumatic hemorrhage of right cerebrum with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.343S	Traumatic hemorrhage of right cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, sequela
S06.344S	Traumatic hemorrhage of right cerebrum with loss of consciousness of 6 hours to 24 hours, sequela
S06.345S	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.349S	Traumatic hemorrhage of right cerebrum with loss of consciousness of unspecified duration, sequela
S06.34AS	Traumatic hemorrhage of right cerebrum with loss of consciousness status unknown, sequela
S06.350S	Traumatic hemorrhage of left cerebrum without loss of consciousness, sequela
S06.351S	Traumatic hemorrhage of left cerebrum with loss of consciousness of 30 minutes or less, sequela
S06.352S	Traumatic hemorrhage of left cerebrum with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.353S	Traumatic hemorrhage of left cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, sequela
S06.354S	Traumatic hemorrhage of left cerebrum with loss of consciousness of 6 hours to 24 hours, sequela
S06.355S	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.359S	Traumatic hemorrhage of left cerebrum with loss of consciousness of unspecified duration, sequela
S06.35AS	Traumatic hemorrhage of left cerebrum with loss of consciousness status unknown, sequela
S06.360S	Traumatic hemorrhage of cerebrum, unspecified, without loss of consciousness, sequela
S06.361S	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, sequela
S06.362S	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.363S	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 1 hours to 5 hours 59 minutes, sequela
S06.364S	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 6

ICD-10-CM Diagnosis Codes	Description
	hours to 24 hours, sequela
S06.365S	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.369S	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of unspecified duration, sequela
S06.36AS	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness status unknown, sequela
S06.5X9S	Traumatic subdural hemorrhage with loss of consciousness of unspecified duration, sequela
S06.5XAS	Traumatic subdural hemorrhage with loss of consciousness status unknown, sequela
S06.6X0S	Traumatic subarachnoid hemorrhage without loss of consciousness, sequela
S06.6X1S	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, sequela
S06.6X2S	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.6X3S	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, sequela
S06.6X4S	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, sequela
S06.6X5S	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.6X9S	Traumatic subarachnoid hemorrhage with loss of consciousness of unspecified duration, sequela
S06.6XAS	Traumatic subarachnoid hemorrhage with loss of consciousness status unknown, sequela
S06.890S	Other specified intracranial injury without loss of consciousness, sequela
S06.891S	Other specified intracranial injury with loss of consciousness of 30 minutes or less, sequela
S06.892S	Other specified intracranial injury with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.893S	Other specified intracranial injury with loss of consciousness of 1 hour to 5 hours 59 minutes, sequela
S06.894S	Other specified intracranial injury with loss of consciousness of 6 hours to 24 hours, sequela
S06.895S	Other specified intracranial injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.899S	Other specified intracranial injury with loss of consciousness of unspecified duration, sequela
S06.89AS	Other specified intracranial injury with loss of consciousness status unknown,

ICD-10-CM Diagnosis Codes	Description
	sequela
S06.8A0S	Primary blast injury of brain, not elsewhere classified without loss of consciousness, sequela
S06.8A1S	Primary blast injury of brain, not elsewhere classified with loss of consciousness of 30 minutes or less, sequela
S06.8A2S	Primary blast injury of brain, not elsewhere classified with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.8A3S	Primary blast injury of brain, not elsewhere classified with loss of consciousness of 1 hour to 5 hours 59 minutes, sequela
S06.8A4S	Primary blast injury of brain, not elsewhere classified with loss of consciousness of 6 hours to 24 hours, sequela
S06.8A5S	Primary blast injury of brain, not elsewhere classified with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.8A9S	Primary blast injury of brain, not elsewhere classified with loss of consciousness of unspecified duration, sequela
S06.9X0S	Unspecified intracranial injury without loss of consciousness, sequela
S06.9X1S	Unspecified intracranial injury with loss of consciousness of 30 minutes or less, sequela
S06.9X2S	Unspecified intracranial injury with loss of consciousness of 31 minutes to 59 minutes, sequela
S06.9X3S	Unspecified intracranial injury with loss of consciousness of 1 hour to 5 hours 59 minutes, sequela
S06.9X4S	Unspecified intracranial injury with loss of consciousness of 6 hours to 24 hours, sequela
S06.9X5S	Unspecified intracranial injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, sequela
S06.9X9S	Unspecified intracranial injury with loss of consciousness of unspecified duration, sequela

IX. REFERENCES

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X. POLICY HISTORY

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MP 8.007	**Admin update 1/1/17:** Product variation section reformatted. New diagnosis codes added effective 10/1/16
	CAC 5/23/17 Consensus review. No changes to the policy statements**.** References and rationale updated. Coding reviewed.
	1/1/18 Admin Update: Medicare variations removed from Commercial Policies. Added new codes 97127 and G0515 plus removed end dated code 97532 effective 1/1/18.
	2/9/18 Consensus review. No changes to the policy statements. Rationale and references updated.
	2/1/19 Consensus review. No changes to policy statements. References and background reviewed. Rationale condensed. Coding reviewed. Changes to diagnosis codes to match policy statements.
	1/1/2020 Coding update. New codes added; 97129 & 97130. Deleted codes removed from policy 97127 & G0515.
	03/26/2020 Consensus review. No changes to policy statements.
	4/12/2021 Consensus review. No change to policy statement. Rationale and References updated.

	3/7/2022 Major review. Cognitive rehab no longer has to be comprehensive or be 3 hours per day. Took language from policy guidelines and placed as criteria in statement. No longer listing out investigational conditions. Updated policy guidelines, FEP, rationale, definitions, and references. Added ICD-10 codes.
	9/1/2022 Administrative review. 17 New ICD-10 codes added. Effective date 10/1/2022.
	5/18/2023 Consensus review. Updated references. No changes to coding.

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