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ETS Policy Statement for Documentation of Traumatic Brain Injury in Adolescents and Adults

First Edition 2014

Office of Disability Policy
Educational Testing Service
Princeton, NJ 08541

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Table of Contents

Preface

Definitions

Confidentiality Statement

Introduction

- I. A Qualified Evaluator Must Conduct the Evaluation**
- II. Documentation Necessary to Support the Diagnosis and Accommodations**
- III. The Currency Requirements for Documentation**
- IV. Psychotropic Medications and Documentation Requirement**
- V. A Rationale for Each Accommodation Should be Included**
- VI. Multiple Diagnoses**
- VII. Additional Sources of Information**

Appendices

- A. Veterans Affairs (VA)/Department of Defense (DoD) Severity Scheme**
- B. Assessment Tools for Post-Concussive Syndrome**
- C. A Primer on Medications and Testing Accommodations for Test Takers with Traumatic Brain Injuries**
- D. Recommended Resources for Consumers**
- E. Resources and Organizations**

Acknowledgements

Preface

Recent years have witnessed an increase in awareness of the public health consequences of traumatic brain injuries (TBIs) by the public and medical professionals alike. According to the most recent statistics published by the United States Centers for Disease Control (2010), there are approximately 2.5 million emergency room visits per year in the United States related to TBIs. Many so-called minor head injuries are never even brought to medical attention. In the brief span of 2013 to 2014, ETS has seen a 22 percent increase in accommodation requests from test takers who have experienced a TBI. Every traumatic brain injury is unique. Some cause consequences that are temporary and short-lived, while others involve long-term effects that can result in limitations of one or more major life activities, psychosocial disruptions, and lost earning capacity. Common TBI scenarios include motor vehicle accidents, falls, assaults, and sports-related injuries.

This first edition of the *ETS Policy Statement for Documentation of Traumatic Brain Injury in Adolescents and Adults* is intended to be used by many constituent groups including, but not limited to, (1) test takers requiring documentation to establish eligibility for appropriate accommodations; (2) professionals who provide psychiatric, psychological, or neuropsychological documentation; (3) postsecondary personnel; and (4) licensing and testing agencies.

Traumatic brain injuries are heterogeneous conditions with varied longitudinal courses and outcomes. Some individuals with TBIs may have co-morbid diagnoses such as post-traumatic stress disorder, depression, anxiety, or physical disabilities. To make accommodations decisions that ensure both equity and access to tests for this population, ETS requires current and detailed information about a person's injury and his/her level of functioning. Given the complexity of the TBI diagnosis, the review process is highly individualized, and ETS may request additional information if necessary. The intent of such requests is not to be burdensome, but to provide ETS with a full understanding of the test taker's current functional limitations as they relate to the test-taking context.

For additional copies of this publication, as well as the most recent versions of other ETS disability-related documentation materials, please visit www.ets.org/disabilities.

Definitions

Traumatic Brain Injury: A traumatic brain injury (TBI) involves a disruption of normal brain function as a result of exposure to an external physical force. The trauma may involve a direct impact from an object striking the head or the head striking an object. Damage to the brain can be indirect, as when the rest of the body is suddenly subjected to acceleration or deceleration or to the shock wave from an intense explosion. TBIs may have mild to profound effects on physical, psychological, emotional, and/or social functioning. They are classified in multiple ways. A primary injury refers to damage that immediately results from the trauma, and may involve bruises and bleeding in the brain itself or damage

to surrounding structures. This primary event can set in motion a series of molecular responses that can lead to further damage, through changes in membrane activity, release of neurotransmitters, oxygen deprivation, swelling, increased pressure inside the skull, etc. TBIs can also be further classified by type (open vs. closed; uncomplicated vs. complicated) and severity. Please see Appendix A, “Veterans Administration (VA)/Department of Defense (DoD) Severity Scheme,”

Closed Traumatic Brain Injury: A closed traumatic brain injury occurs when the skull is not fractured or penetrated, but brain tissue is damaged by the forces that cause shifting or stretching and contact between the brain and the rough inside surface of the skull.

Open Traumatic Brain Injury: An open traumatic brain injury occurs when the skull has been fractured or penetrated by a foreign object. Open head injuries expose the brain to the outside world and bring an increased risk of complications such as infection, leakage and disrupted flow of cerebrospinal fluid, and seizures.

Concussion: Concussion is a clinical subset accounting for an estimated 75 to 90 percent of traumatic brain injuries. In the United States, the term is often used interchangeably with Mild Traumatic Brain Injury (mTBI). Six key elements characterize concussion: (1) it is a complex pathophysiological process; (2) it results in the rapid onset of neurological impairment that typically resolves spontaneously; (3) loss of consciousness and amnesia may or may not occur; (4) brain imaging (e.g., CT scan, MRI) typically fails to show evidence of structural abnormality, and brain dysfunction in concussion is usually related to problems with brain metabolism rather than structural damage or injury; (5) multiple domains are often affected in its aftermath (i.e., physical, behavioral, cognitive, and sleep disturbances); and (6) clinical presentation varies substantially across individuals.

Post-Concussive Syndrome (PCS): Post-concussive or post-concussion syndrome is a set of symptoms that may continue for weeks, months, or occasionally a year or more after a concussion. Common features include headache, dizziness, irritability, diminished concentration, sleep disturbance, and intolerance to stimulation (e.g., lights or sound).

Cumulative Head Trauma: The damage caused by repeated blows to the head or multiple concussions. Evidence is accumulating for a new clinical entity known as Cumulative Traumatic Encephalopathy (CTE), which is characterized by a progressive deterioration of functioning heralded by mood and personality changes and ultimately resulting in global dementia. Professional athletes in football, hockey, and boxing appear to be at elevated risk for this syndrome.

Blast Trauma: A new category of brain injury that occurs when the human body is subjected to intense pressure emanating from explosions. This injury has been seen extensively in military service members returning from the Middle East who have been exposed to blasts from improvised explosive devices and rocket-propelled grenades.

Second Impact Syndrome: A dire clinical situation in which an individual with an unresolved TBI undergoes a second — sometimes seemingly minor — brain injury hours or days later, and then suffers life-threatening or fatal complications. It is thought that the underlying molecular alterations that are set in motion following the initial injury render the brain exceedingly vulnerable to further damage for a narrow window of time. Preventing this syndrome is one of the main objectives of the “return to play” restrictions following TBI.

Confidentiality Statement

ETS takes the confidential, private, and sensitive nature of disability documentation very seriously. ETS will not release any information regarding an individual’s diagnosis or condition without his or her informed consent or under compulsion of legal process. Information will be disclosed only on a "need to know" basis except where otherwise required by law. Furthermore, to safeguard the confidentiality of individuals with disabilities, evaluators may withhold or redact any portion of the documentation that is not directly relevant to ETS’s criteria for establishing both (1) a disability as defined by the Americans with Disabilities Act Amendments Act (ADA AA) of 2008 and (2) a rationale for all requested testing accommodations. If a section of a report has been redacted, the evaluator should provide an acknowledgement and rationale for this action.

Introduction

ETS is committed to serving test takers with disabilities, including those with traumatic brain injury (TBI) or concussions. Under the Americans with Disabilities Act Amendments Act (ADA AA) of 2008, individuals with disabilities are protected from discrimination and may be entitled to reasonable accommodations. A disability is defined as a physical or mental impairment that substantially limits functioning in one or more major life activities. Individuals with traumatic brain injuries may experience difficulties with remembering, concentrating, hearing, reading, speaking, thinking, reasoning, and regulating bodily functions — each a major life activity — which may interfere with the test-taking process.

Individuals with traumatic brain injuries (TBIs) often experience co-occurring disabilities (i.e., “co-morbidities”) such as Attention-Deficit/Hyperactivity Disorder (ADHD), learning disabilities (LD), psychiatric disabilities (e.g., PTSD, depression, anxiety), and/or physical disabilities or chronic health conditions (e.g., headaches, nausea, seizures, loss of bowel or bladder control). If a test taker has multiple diagnoses that may affect his or her ability to perform on test day, test takers and evaluators should consult the appropriate ETS documentation guidelines at <http://www.ets.org/disabilities/documentation>. Test takers should submit all appropriate documentation at one time to support the disabilities and

the related functional limitations. Doing so will facilitate the efficient and prompt processing of accommodations requests.

To receive testing accommodations, a test taker must provide ETS with current documentation that supports the need for reasonable accommodations that (1) allow equal access to the testing environment and (2) do not fundamentally alter any essential component of the test. A diagnosis of TBI alone is insufficient to support a need for testing accommodations. Additional information may be requested to determine the nature and severity of a disorder/injury and/or the functional limitations that may be relevant to taking a standardized test.

A history of receiving accommodations in previous academic environments or on other standardized tests (e.g., ACT®, SAT®) does not guarantee that a test taker will be granted accommodations on a high-stakes examination. Even though prior documentation may have been adequate for determining appropriate services or accommodations previously, a history of accommodations without demonstration of a current need does not in itself warrant the provision of similar accommodations. ETS staff will advise the test taker and the evaluator as needed regarding any necessary documentation.

A special note for veterans:

The Veterans Health Administration treats and cares for veterans with traumatic brain injuries (TBI). To locate a facility, visit:

<http://www.va.gov/directory/guide/home.asp?isflash=1>. Veterans may receive an evaluation by the Veterans Benefits Administration. This examination, which can include assessment of both the injury and its associated complications, may be completed as part of a disability claim. The documentation from this examination should be submitted as a part of the accommodations request packet; however, it may not contain all of the necessary information relevant to standardized test taking. The Vocational Rehabilitation division of the Veterans Benefits Administration is staffed by vocational counselors, who may be better able to address disability-related needs and the accommodations necessary for test taking.

I. A Qualified Professional Must Conduct the Evaluation

Professionals conducting assessments, rendering diagnoses, and making recommendations for appropriate accommodations for individuals with traumatic brain injury (TBI) must be qualified to do so. According to the ADA, “A qualified professional is licensed and otherwise properly credentialed and possesses expertise in the disability for which modifications or accommodations are sought.” Comprehensive training and relevant experience with adolescents and adults with TBI are essential.

The name, title, and professional credentials of the evaluator, including information about license or certification (e.g., licensed psychologist) as well as the area of specialization, employment, and state in which the individual practices, must be clearly

stated in the documentation. The following professionals would generally be considered qualified to conduct evaluations provided that they have additional training and experience in evaluating adolescents and adults with traumatic brain injury: clinical psychologists; neuropsychologists; neurologists; occupational therapists, speech and language pathologists, and medical doctors with demonstrated training and experience in the assessment of traumatic brain injury in adolescents and adults. It is not appropriate for professionals to evaluate members of their own families, close friends, or members of a close friend's family. All reports should be on letterhead, typed in English, dated, signed, and otherwise legible.

II. Documentation Necessary to Support the Diagnosis and Accommodations

Documentation to support a diagnosis of a TBI often comes from a variety of qualified professionals who have examined, tested, or worked directly in a variety of different capacities with the individual who has sustained a TBI. Therefore, ETS acknowledges that documentation of this complex condition may be medically, psychologically, academically, and/or vocationally oriented. Results of all tests used to evaluate the individual with a TBI should be included if relevant. Typically, TBI documentation is based on a comprehensive diagnostic protocol that includes objective as well as subjective data and adheres to the guidelines outlined in this document. The diagnostic report should include the following five components:

1. Specific diagnosis or diagnoses in accordance with the latest versions of the DSM or ICD
2. Description of current as well as residual symptoms, including their frequency, intensity, and duration in the testing environment as well as across other settings (e.g., high school, college, employment, daily life activities)
3. Detailed medical information in narrative form relating to the individual's current needs, including the effects of medications or current treatment approaches
4. A narrative discussion of all relevant information, including results of standardized assessment measures, if applicable
5. Relevant information regarding the test taker's prescribed use of medications that may be taken on the day of the test

In most cases, a neuropsychological or psychoeducational evaluation will be useful in clarifying the functional impact of the diagnosed disability and in supporting the underlying rationale for accommodations on a high-stakes test. Please see Appendix B, "Assessment Tools for Post-Concussive Syndrome." If the brain injury primarily affects

sensory and/or motor functioning, a neuropsychological or psychoeducational evaluation may not be necessary. In these cases, documentation from a professional such as a neurologist, optometrist, or occupational therapist may be sufficient. The following section provides more detailed information regarding historical and diagnostic information that may be helpful to evaluators.

A. Historical Information, Diagnostic Interview, and Psychological Assessment

Behavioral observations, combined with the clinician's professional judgment and expertise, are often critical in helping to formulate a diagnostic impression. The evaluator should specifically indicate behaviors that are likely to impact the examinee's performance on a high-stakes test. This section of the diagnostic report should include the following:

- History of presenting symptoms, including date and cause of injury and date of release from hospitalization/rehab, if applicable
- Severity of symptoms and evidence of current impairment
- Relevant medical and medication history, including the individual's current medication regimen and adherence, side effects (if relevant), and positive and negative responses to medication as reported by the candidate
- Co-existing conditions, if any
- Results of neuropsychological or psychoeducational assessment, where applicable

B. Documentation Should Typically Address the Following Domains:

- Memory – the ability to store information for recall, as well as long-term storage and retrieval of previously acquired knowledge
- Attention – the ability to focus and maintain concentration on relevant information and shift appropriately in support of other “higher” cognitive operations
- Speed of thinking/processing – how long it takes the individual to process information compared to peers
- Communication/language – writing, reading, speaking, and/or listening abilities, as well as any pragmatic communication issues such as interrupting others,

talking out of turn, dominating discussions, or speaking too loudly or in a manner perceived as rude

- Spatial reasoning – ability to recognize shapes of objects, judge distances accurately, read a map, visualize images, or comprehend mechanical relationships
- Conceptualization – ability to categorize, sequence, abstractly classify, or generalize information
- Executive functioning – ability to engage in goal setting, plan, work flexibly toward a desired outcome, and monitor one’s own performance
- Psycho-social behaviors – Although these are generally not directly related to test taking, it may be helpful to evaluate any issues such as depression, withdrawal, cognitive inflexibility, denial, irritability, lowered frustration tolerance, restlessness, anxiety, poor social judgment, apathy, fatigue, or decreased awareness of personal hygiene
- Motor, sensory, or physical abilities – includes sensory and perceptual deficits and limitations in coordination and mobility

Adapted from: Center for Students with Disabilities, University of Connecticut, Storrs, CT, (2014). www.csd.uconn.edu/fs_tbi.html

III. **The Currency Requirements for Documentation**

Recovery from TBI is an evolving, dynamic process, with wide variability in its timing and completeness across individuals. If an injury is in the mild range, a stable endpoint is typically achieved within approximately three months. In moderate to severe TBIs, the recovery process can continue for many months or years. It is also possible for secondary complications such as seizures or mood dysfunction to arise well after the initial event. Additionally, intervening events or later treatments for TBI (e.g., medications) may lead to further problems.

It is critical that some aspect of the clinical information submitted to ETS for review should accurately reflect the applicant's current functional status. Since further recovery can occur, the applicant’s accommodation needs are not necessarily fixed as of the date of the evaluation. The submitted functional profile should reflect the capacities of the test taker in a time frame that is relevant to the anticipated standardized test administration. The absolute age of the documentation is another factor that ETS will take into consideration. Even after a stable recovery, the passage of time can alter the functional profile of an individual with a TBI. If the head injury or trauma occurred

within the last year, ETS needs current documentation. For those individuals with a date of injury exceeding one year, documentation may be within the last three years.

Updated documentation can consist of a detailed clinical description of the applicant's current functional status and accommodation needs provided by an appropriately credentialed/licensed professional. Such an update need not include an extensive battery of psychological or neurological tests. As with all accommodation requests, ETS's decision will take into consideration all documentation submitted for review and decisions will be made on a case-by-case basis.

IV. Psychotropic Medications and Documentation Requirements

All test takers applying for accommodations for a traumatic brain injury (TBI) who are being treated with psychotropic medications should provide the following basic information as part of his/her submitted documentation: (1) the name (generic or trade) of each specific agent; (2) the dosing regimen; and (3) any side effects experienced. Physicians or other prescribers providing documentation should verify the basic parameters of the medication treatment: rationale, agent(s) used, and dosing regimens, duration of treatment, adherence, therapeutic benefit, and adverse side effects, if any. Please see Appendix C, "A Primer on Psychotropic Medications and Testing Accommodations for Test Takers with Traumatic Brain Injuries," for additional details.

Some test takers may be tempted to go off their usual medications before undergoing a diagnostic evaluation in order to demonstrate the existence of a disabling condition more clearly. This is often misguided, since abrupt withdrawal and rebound effects can distort test performance and complicate the interpretation of test results. If a formal psychological assessment is undertaken to help document the presence of ongoing functional limitations, it typically makes sense to undergo such testing while one is taking his/her usual drug regimen. According to the ADA AA, therapeutic response to medication may not be used to deny the presence of a disabling condition. Nonetheless, considering both beneficial and negative effects of a treatment regimen is relevant to the granting of appropriate accommodations for this population.

V. A Rationale for Each Accommodation Should Be Included

- A. A link must be established between each requested accommodation and the individual's current functional limitations as they pertain to the testing situation. Clinicians and qualified professionals should be highly specific with the disability-driven rationale for the requested accommodation(s).
- B. A diagnosis in and of itself does not automatically warrant approval of requested accommodations. Linking the diagnosis to functional limitations is essential.

- C. In the case of manifestations of TBI that can cause periodic or waxing and waning symptoms (such as epilepsy, migraine, depression, or panic attacks), clinicians should explain how the frequency and severity of such associated problems justifies the need for the recommended accommodations. Although a previously sustained concussion may cause an individual to suffer occasional headaches, the mere potential for a headache during standardized testing may not in itself justify the provision of accommodations.
- D. Accommodations will be provided only when a strong rationale is provided. Given the nature of certain TBI diagnoses, qualified professionals may recommend additional rest breaks for medical routines (e.g., taking medication, relaxation techniques) as an accommodation. Furthermore, additional or extended rest breaks may better accommodate some disabilities than would additional testing time.
- E. A prior history of accommodations should be given considerable weight, but it does not in and of itself warrant the provision of accommodations without the demonstration of current need. Furthermore, if there is no prior history of accommodations, the evaluator and/or the test taker must include a detailed explanation of why accommodations were not needed in the past and why they are now being requested.

VI. Multiple Diagnoses

Multiple diagnoses may require a variety of accommodations beyond those typically associated with the impact of a single diagnosis. For example, when accommodations are requested based on multiple diagnoses (e.g., a psychological disability with an accompanying learning disability), documentation should comply with the ETS policy statements pertaining to the documentation of each specific disability that is relevant. In such instances, an evaluator should consult ETS's policies and guidelines for documentation. The ETS guidelines for documentation of psychiatric disabilities as well as policy statements pertaining to LD and ADHD can be found at <http://www.ets.org/disabilities/documentation>. If the accommodations requested cannot be supported by the current evaluation and multiple diagnoses are suspected, the evaluator should recommend/refer the individual to another qualified professional for additional testing.

VII. Additional Sources of Information

Other sources of documentation can be used to corroborate symptoms of the disorder and support the need for the requested accommodation(s). Relevant information from these sources should be summarized by the evaluator in the current disability documentation and/or included as an attachment by the applicant.

Depending on the degree and scope of the information it contains, a school-based document such as an Individualized Education Program (IEP), a Section 504 Plan, a Summary of Performance (SOP), or transition documentation can be included as part of a more comprehensive documentation packet. Prior evaluation reports should be reviewed by the evaluator and summarized in the history section or attached to the documentation packet. Such documents may provide useful supplemental information about a test taker's educational history, history of eligibility for services, history of limitations to academic achievement, and history of accommodation use.

Other supplemental forms of documentation may include evidence of a reduced course load or the number of incompletes or dropped courses, a copy of an accommodation letter to faculty, a letter from a content area teacher, and/or official scores with or without accommodations from national standardized tests (e.g., SAT, ACT®). A detailed letter from a college disability services provider, a vocational rehabilitation counselor, or a human resources professional describing current limitations and use of accommodations can also be helpful to supplement comprehensive documentation.

In addition, a brief personal letter from the applicant in his/her own words explaining academic difficulties and coping strategies employed to overcome them may be helpful. The evaluator's and/or the applicant's personal letter should highlight the relevant information from these other forms of documentation that adds further support for the current need for accommodations. The personal letter need not exceed one page and may include information regarding the date of the initial diagnosis, accommodation history in a variety of settings, a statement explaining the need for accommodations that are presently requested, and any additional supporting information for the requested accommodations. A personal statement in the absence of documentation from a professional is not sufficient.

For additional information contact:

Mail:

ETS
Disability Services
P.O. Box 6054
Princeton, NJ 08541-6054

Phone:

1-866-387-8602 — Toll free from the United States, U.S. Territories* and Canada
1-609-771-7780 (all other locations)
1-609-771-7714
Fax: 1-609-771-7165
Email: stassd@ets.org

* Includes American Samoa, Guam, Puerto Rico, and U.S. Virgin Islands.

Appendix A: Veterans Affairs (VA)/Department of Defense (DoD) Severity Scheme

Severity Ratings of TBI Based on Clinical Signs

Criterion	Mild	Moderate	Severe
Structural Imaging	Normal	Normal or Abnormal	Normal or Abnormal
Loss of Consciousness (LOC)	0–30 min	>30 min and <24 hrs	>24 hrs
Alteration of Consciousness (AOC)/Mental State	≤ 24 hrs	>24 hrs	>24 hrs
Posttraumatic Amnesia (PTA)	≤ 24 hrs	>24 hrs and <7 days	>7 days
Glasgow Coma Scale (GCS) (best 24°)	13–15	9–12	3–8

Appendix B: Assessment Tools for Post-Concussive Syndrome

- Acute Concussion Evaluation Test
- Automated Neuropsychological Assessment Metrics (ANAM)
- Balance Error Scoring System (BESS)
- British Columbia Post-concussion Symptom Inventory (BC-PSI)
- Concussion Resolution Index
- Concussion Symptom Inventory
- Graded Symptom Checklist (GSC)
- ImPACT (Immediate Post-concussion Assessment and Cognitive Testing)
- Military Acute Concussion Evaluation (MACE)
- Post-Concussion Symptom Scale (PCSS)
- Rivermead Post Concussion Symptoms Questionnaire (RPQ)
- SCAT-3 (Sports Concussion Assessment Tool-3)
- Swedish Post-concussion Symptoms Questionnaire
- VA Traumatic Brain Injury Screening Tool

Appendix C: A Primer on Medications and Testing Accommodations for Test Takers with Traumatic Brain Injuries

Various types of medications may be prescribed to individuals who have sustained a traumatic brain injury. Since injuries vary widely in character and severity, the use of medications is very specific to the individual circumstances. Medications may address physical symptoms and/or cognitive issues. Such agents include:

- analgesics for pain relief and pain management
- anti-convulsants to prevent seizures
- muscle relaxants to reduce muscle spasms or spasticity
- sedative-hypnotic agents to induce sleep or reduce activation of the central nervous system
- psychotropic medications such as: anxiolytics (i.e., anti-anxiety agents, to address feelings of nervousness or fear), anti-depressants (to treat symptoms of depression), anti-psychotics (to address psychotic symptoms such as agitation, combativeness, hostility, hallucinations, and sleep disorders), mood stabilizers (which address intense mood shifts that interfere with day-to-day functioning), and stimulants (to increase levels of mental stamina, alertness, and attention)

Most medications have a generic (i.e., chemical) name as well as a trade (i.e., brand or commercial) name. For example, a generic drug such as Zolpidem is also marketed under the trade name Ambien. This does not mean that all such agents are equivalent, since there may be differences in how they are formulated. In addition, some drugs may be used to treat more than one condition. Cyclobenzaprine, the generic name for Flexeril, may be prescribed as a muscle relaxant or to treat insomnia.

The intended therapeutic action of some drugs can improve cognitive functioning in everyday life as well as performance on school-based examinations, clinical assessments, and high-stakes standardized tests. However, the alterations in brain physiology that are positive may additionally result in unwanted side effects, known as adverse events. Some side effects may also be beneficial — for example, an antidepressant that causes sedation may actually help someone to sleep at night in addition to improving his or her mood. Side effects can occur at any time in the course of treatment: at the initiation of a new medication, when a dosing regimen is changed, during maintenance on a stable dose when personal health or circumstances change, or upon discontinuation. When side effects occur, the prescribing professional should work with the individual to analyze the costs and benefits of staying on the medication, discontinuing it, or trying a different agent. Other options include an alteration in the dosing regimen (e.g., amount, timing) or the form of the agent (e.g., short-acting, sustained-release) that might minimize the side effect or allow the patient to tolerate it better.

Some side effects can negatively affect cognitive functioning in ways that directly impact test-taking performance. Examples include sedation, mental and physical slowing, diminished concentration, and restlessness. Other side effects have the potential to impede test performance indirectly through distracting or incapacitating discomforts such as thirst, dry

mouth, nausea, frequent urination, light-headedness, dizziness, or headache.

Individual reactions to medications are highly variable. It is not possible to predict either their therapeutic impact or their side effects with an acceptable degree of confidence. Therefore, one cannot assume which particular benefit(s) or side effect(s) a given drug will produce in a particular person. A trial of a medication is often called “empirical” because its impact becomes known only as the user’s experience with the drug unfolds. It is important to expect that each individual will experience a medication uniquely in terms of both its positive and negative effects.

Since different individuals may experience the same medication differently, and since both positive and negative effects of these medicines could impact test-taking performance, it is important to consider some of the variables that determine how these effects are experienced. The length of time an active ingredient of a medication stays in the body depends on what parts of the body absorb it, how strongly it binds to other bodily substances (e.g., proteins), and how effectively enzymes break it down. Sometimes a medication is designed to be released slowly to allow the active ingredient(s) to linger in the body. The length of time a medication lasts in the system depends on how it gets into, stays in, and is removed from the body. Across individuals, this duration of action varies greatly for some medications. When and how much medication is taken, and how long its effects last, will determine what level of the medication is in a person’s system at a given time. The length of time required for medication to take effect and for effects to wear off is also variable, as biological effects differ across individuals. Discontinuing a medication can result in withdrawal symptoms in some cases. Medications can also produce longer-term changes in brain functions that persist after the drug itself is cleared from the body. With knowledge of the specific properties of the medication(s) involved, a strategy for tapering dosages can often be devised, along with a “Plan B” if one is having difficulty tolerating being off the medication in question. Any contemplated change in one’s medication usage should be discussed with and approved by an appropriate expert medical provider.

In some cases, a medication will have different effects over the course of the day. For example, some medications will produce discomforts such as nausea, headache, mood distress, or sedation either as they peak in the system or as they wear off. It may take careful tracking of symptoms for someone on medication to appreciate such patterns.

Polypharmacy is the term used when an individual is taking multiple medications for one or more medical issues. This common situation further complicates establishment of the positive and negative effects of individual medications. The presence of other medical conditions that affect the way one’s body absorbs and excretes a medication is yet another factor to consider in evaluating drug effects and in making treatment decisions.

The list of available medications is lengthy and ever-changing. Information about duration of drug effects, side effects, and discontinuation effects is available from expert sources. ETS recommends consulting a range of trusted sources, such as:

- <http://www.biausa.org/Default.aspx?SiteSearchID=1192&ID=/search-results.htm>
- <http://www.accessdata.fda.gov/scripts/cder/drugsatfda/index.cfm>
- <http://www.webmd.com/drugs/>
- <http://www.nlm.nih.gov/medlineplus/druginformation.html>
- www.pdrhealth.com
- <http://www.drugs.com>

Disclaimer

The information above is provided specifically for the purpose of guiding ETS consumers with traumatic brain injuries in making informed choices regarding their requests for accommodations. This information should not be construed as an attempt to offer professional counseling or medical advice or as a substitute for such counseling or advice.

(M. Greenberg, L. Muskat, 2014)

Appendix D: Recommended Resources for Consumers

1. If you are currently not under the care of a qualified professional and need assistance in identifying one, contact any of the following:
 - a. your primary care physician to discuss obtaining a referral
 - b. the disability services coordinator or college counselor and/or mental health service provider at a college or university, or Veterans Affairs counselor, for possible referral sources
 - c. a high school nurse, nurse practitioner, guidance office and/or counselor
 - d. a physician who may be able to refer you to a qualified professional with demonstrated expertise in TBI disorders

2. In selecting a qualified professional, ask:
 - a. what experience and training he or she has had diagnosing adolescents and adults with TBI.
 - b. whether he or she has training in differential diagnosis and the full range of psychological disorders. Clinicians typically qualified to diagnose TBI include clinical psychologists, neuropsychologists, neurologists, and other relevantly trained medical doctors with experience in the assessment of TBI in adolescents and adults.
 - c. whether he or she has ever worked with a postsecondary disability service provider, a high school guidance counselor, or the agency to which you are providing documentation.
 - d. whether you will receive a comprehensive written report.

3. In working with the professional:
 - a. take a copy of these guidelines to the professional.
 - b. be prepared to be candid and thorough in providing requested information.

4. As a follow-up to the assessment by the professional:
 - a. schedule a meeting to discuss the results, recommendations, and possible treatment.
 - b. request additional resources, support group information, and publications if you need them.
 - c. maintain a personal file of your records and reports, and keep a copy of any reports or documentation you submit to a testing agency.
 - d. be sure to discuss the issues of confidentiality with the professional at the outset of the evaluation as well as during the follow-up meeting.

Appendix E: Resources and Organizations

Association on Higher Education and Disability (AHEAD)

107 Commerce Center Drive, Suite 204
Huntsville, NC 28078
1-704-947-7779 voice
1-704-948-7779 fax
<http://www.ahead.org>

AHEAD is a professional membership organization for individuals involved in the development of policy and in the provision of quality services to meet the needs of persons with disabilities involved in all areas of higher education.

BrainLine.org

WETA
2775 South Quincy Street
Arlington, VA 22206
1-703-998-2020 voice
<http://brainline.org>

BrainLine is a national multimedia project offering information and resources about preventing, treating, and living with TBI. BrainLine includes a series of webcasts, an electronic newsletter, and an extensive outreach campaign in partnership with national organizations concerned about traumatic brain injury.

Brain Injury Association of America

1608 Spring Hill Road, Suite 110
Vienna, VA 22182
1-703-761-0750 voice
1-703-761-0755 fax
<http://www.biausa.org>

The mission of the Brain Injury Association of America (BIAA) is to advance brain injury prevention, research, treatment, and education, and to improve the quality of life for all people affected by brain injury. We are dedicated to increasing access to quality health care and raising awareness and understanding of brain injury. With a network of state affiliates, local chapters, and support groups, we are the voice of brain injury.

Brain Injury Network

707 Hahman Drive, #9276
Santa Rose, CA 95405-9276
1-707-544-4323 voice
1-707-538-1555 fax
<http://www.braininjurynetwork.org>

The purpose of BIN is to engage in activities that promote the best interests of individuals with acquired brain injuries and their families and service providers. Activities include, but are not limited to, education, emotional support, and recreation for persons with acquired brain injuries; advocacy on behalf of persons with acquired brain injuries; and education of the public to foster awareness about acquired brain injuries and to prevent acquired brain injuries.

Brain Trauma Foundation

7 World Trade Center
250 Greenwich Street, 34th Floor
New York, NY 10017
1-212-772-0608 voice
1-212-772-0357 fax
<http://www.braintruma.org>

A nationwide organization devoted to improving the outcome of traumatic brain injury patients, the Brain Trauma Foundation focuses on the acute phase of traumatic brain injury (TBI) and methods to improve chances of a meaningful recovery. The Foundation works to improve the care of TBI patients from the scene of injury to the emergency room and ICU through guidelines development, professional education, quality improvement, and clinical research.

Centers for Disease Control and Prevention National Center for Injury Control and Prevention (NCIPC)

4770 Buford Hwy, NE
MS F-63
Atlanta, GA 30341-3717
1-800-232-4636 voice
<http://www.cdc.gov/traumaticbraininjury>

CDC's research and programs work to prevent TBI and help people better recognize, respond, and recover if a TBI occurs.

National Institute of Neurological Disorders and Stroke (NINDS)

NIH Neurological Institute
P.O. Box 5801
Bethesda, MD 20824
<http://www.ninds.nih.gov>

The mission of NINDS is to seek fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease

U.S. Department of Veterans Affairs

Veterans Health Administration
810 Vermont Ave.
NW Washington, DC 20420
<http://www.va.gov/health>

The Veterans Health Administration is home to the United States' largest integrated health care system, consisting of 150 medical centers, nearly 1,400 community-based outpatient clinics, community living centers, and Vet Centers. Healthcare Practitioners provide comprehensive care to millions of veterans each year.

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