

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

|   |   |                  |
|---|---|------------------|
| JESSICA RAMSAY,                         | : |                  |
| Plaintiff                               | : |                  |
|   | : |                  |
| v.                                      | : | CIVIL ACTION NO. |
|   | : |                  |
| NATIONAL BOARD OF MEDICAL<br>EXAMINERS, | : |                  |
| Defendant                               | : |                  |

**COMPLAINT**

Plaintiff Jessica Ramsay (“Ramsay”) brings this action under the Americans with Disabilities Act (“ADA”), and the Rehabilitation Act: for preliminary and permanent injunctive relief to enjoin and restrain defendant National Board of Medical Examiners (“NBME”) from refusing to grant testing accommodations that are required to enable Ramsay, a person with reading and attentional disabilities, to have equal access to examinations administered by NBME; for declaratory relief concerning Ramsay’s right to receive such accommodations; for the monetary damages that Ramsay has sustained as a result of NBME’s wrongful refusal; and for the costs of suit including reasonable attorneys’ fees and costs.

**Jurisdiction, Parties and Venue**

1. Ramsay is a citizen of Michigan, residing at 6862 Tall Oaks Drive, Apt. 3B, Kalamazoo, Michigan, and is a student in the M.D. program at Homer Stryker M.D. School of Medicine of Western Michigan University (“WMed”).

2. NBME is a non-profit corporation, organized and existing under the laws of the District of Columbia, with its principal place of business at 3750 Market Street, Philadelphia, Pennsylvania.

3. NBME is a recipient of Federal financial assistance, including but not limited to funds from the U.S. Department of Defense and the U.S. Department of Veterans Affairs, and is therefore subject to Section 504 of the Rehabilitation Act.

4. Ramsay's claims against NBME arise under the ADA, 42 U.S.C. §§12101 *et seq.*, including 42 U.S.C. §12189, and under Section 504 of the Rehabilitation Act, , 29 U.S.C. §794. This Court has jurisdiction of this action under 28 U.S.C. §§1331 and 1343(a)(4).

5. Venue is proper because NBME is a resident of this District.

**Facts Giving Rise to Ramsay's Claims Against NBME**

**a. Ramsay is a person with disabilities,  
which affect her ability to read questions on  
written examinations within the allotted time**

6. Ramsay has been diagnosed with dyslexia and attention deficit hyperactivity disorder and has a history of significant reading difficulties and distractability throughout her educational career.

7. Ramsay's impairments with respect to reading and attention substantially limit her in the major life activities of thinking, learning, reading, concentrating, studying, writing, processing information, and taking examinations, as compared with most people.

8. In Ramsay's most recent application to NBME for testing accommodations, she provided a "Personal Statement" as required by the NBME. A copy of Ramsay's most recent Personal Statement, marked Exhibit A, is attached hereto and incorporated herein by reference. As set forth in Ramsay's Personal Statement:

a. Ramsay has "always struggled with flipping, merging, and tangling letters, characters, and words both when reading and writing." Personal Statement at 1.

b. Ramsay also has "trouble distinguishing between words and characters that have similar shapes." *Id.*

c. Ramsay also has particular difficulty with “technical material like the material on the USMLE Step 1 test, [and] must spend a lot of time and effort to untangle the words and decode each one, identifying their individual meanings. Then I must piece them together in the correct sequence, building them up to get the meaning of the text as a whole. This process requires me to reread text multiple times before I can fully comprehend what I am reading. Usually, I also need to read the text aloud, or have it read to me by a person or computer program, to help me interpret the words within the context of the sentence, and then within the paragraph.” *Id.* at 1-2.

d. Ramsay is also significantly impaired with respect to “distractibility and impulsivity” which “make[s] it very difficult to focus on just one idea at a time, causing me to jump quickly from one thought to another, which makes it difficult to maintain my train of thought.” *Id.* at 4.

9. Even before she began attending college, Ramsay struggled with school work and needed to use mitigating strategies including extra studying time and reading avoidance strategies.

10. While attending college at Ohio State University (“Ohio State”) in 2009, Ramsay experienced additional difficulty with school work, because of reading difficulties, including but not limited to slow reading speed and also distractibility. An Ohio State professor recommended that she be evaluated to determine whether she had any behavioral or learning disorder that affected her performance in school and on examinations.

11. Following the recommendation by her Ohio State professor, Ramsay consulted a physician who diagnosed her with Attention Deficit Disorder inattentive type, and who also reported symptoms of dyslexia.

12. Learning disorders like dyslexia and Attention Deficit Disorder are described in an American Psychological Association publication, the Diagnostic and Statistical Manual of Mental Disorders (“DSM”), and also in a publication of the World Health Organization, the International Classification of Diseases (“ICD”). The current version of the DSM is DSM-5, and the current version of the ICD is ICD-10. In DSM-5 and ICD-10, “Attention Deficit Disorder” is now called “Attention Deficit Hyperactivity Disorder” or “ADHD,” and dyslexia is now called “Specific Learning Disorder – Reading” (DSM-5) or “Specific Reading Disorder” (ICD-10). For convenience of reference, the terms “ADHD” and “dyslexia” and the current classifications from DSM-5 and ICD-10 will be used in this Complaint as appropriate.

13. Ramsay has long planned to attend medical school and become a practicing physician, and is well qualified, but needs reasonable accommodations to overcome the barrier presented by defendant’s examinations. Ramsay possesses the knowledge and drive and passion to be successful, but because of her slow reading speed and distractibility, she needs extended testing time in order to access the USMLE step examinations.

**b. The United States Medical Licensing Examination**

14. NBME develops and administers a series of standardized written examinations, known collectively as the United States Medical Licensing Examination (“USMLE”), which are administered throughout the United States.

15. As described more specifically below, the USMLE step examinations are required in order to receive the degree of Doctor of Medicine (M.D.), and also in order to apply for medical residency training programs, and to become licensed as a physician.

16. Ramsay was required by WMed Medical School to take and pass USMLE Step 1 at or near the end of her third year of medical school. Scores on USMLE Step 1 are also an important selection criterion used by medical residency training programs throughout the United

States to rank candidates in the highly competitive residency match process. Therefore, a student who receives a low score on Step 1 – even if it is a passing score – will be unable to compete for many residency programs, and sometimes may fail to be selected for any residency program.

17. Step 2 of the USMLE, which consists of two parts – Step 2 CK (Clinical Knowledge) and Step 2 CS (Clinical Skills) – must be taken and passed by M.D. students prior to graduation from medical school, including WMed Medical School.

18. Step 3 of the USMLE must generally be taken and passed by graduates of M.D. degree programs, prior to licensing as physicians.

19. NBME is obligated to provide students with disabilities with reasonable testing accommodations so that such students can demonstrate their knowledge and ability on the USMLE step examinations.

20. All of the USMLE step examinations are “timed,” *i.e.* must be completed within a set time.

21. NBME must provide additional time to individuals with disabilities where necessary to best ensure that the examination results accurately reflect the individual’s aptitude rather than reflecting the individual’s disability.

22. NBME has provided double time for medical students with dyslexia on the USMLE.

23. The skills that are required in order to completely read the questions on the USMLE step examinations under standard timing conditions include the ability to read fluently and with automaticity, *i.e.*, the ability to recognize words quickly and accurately, and without conscious thought or hesitation.

24. The USMLE step examinations require students to read passages – sometimes referred to as “vignettes” – which are longer and more complex than reading passages on the SAT, ACT, MCAT and other pre-medical school examinations.

25. For examinations that are administered before medical school, including the ACT and MCAT, a student may be able to answer the questions correctly without reading all of the narrative prompts, but for the USMLE step examinations, this is generally not possible.

26. If Ramsay does not receive appropriate accommodations for the USMLE step examinations, her examination results will not adequately reflect what she knows but will rather be a reflection of the barriers of her disability and the failure of the NBME to provide appropriate test accommodations.

27. In fact, Ramsay has already failed USMLE Step 1 on one occasion, because NBME refused to provide the testing accommodations that she needed in order to be able to access the examination on a basis that was equal to people without disabilities.

28. WMed Medical School limits the number of times that a student is permitted to take the Step 1 examination.

**c. Ramsay has previously received the same or similar accommodations to what she is seeking from NBME from her college and medical school.**

29. After receiving a diagnosis of ADHD from her primary care physician in 2009, Ramsay registered with the Office of Disability Services at Ohio State, and Ohio State granted her several accommodations including 50 percent additional testing time, and testing in a reduced-distraction testing space.

30. Ramsay's reading and attentional disabilities were further evaluated when she began attending WMed Medical School in 2014, and WMed Medical School provided additional accommodations including "double time" (100 percent extended testing time) on examinations.

31. Throughout her medical education at WMed Medical School, Ramsay has taken numerous examinations – including subject matter examinations that are developed by NBME but administered by individual medical schools like WMed – and has utilized 100 percent extended testing time. Ramsay has always received 100 percent extended testing time for the NBME-developed subject matter examinations, which are the examinations that are most similar to the USMLE step examinations.

32. The USMLE Step examinations are far more reading intensive than the standardized examinations that Ramsay took prior to medical school. As further explained below in paragraphs 58 and 59, Ramsay needs 100 percent extended testing time as a reasonable accommodation, to permit her to access the USMLE Step examinations on a basis that is equal to students without disabilities.

33. If NBME had granted accommodations to Ramsay, when she first requested such accommodations, she could have graduated from medical school in 2018 and been placed in a medical residency program, through the National Residency Matching Program ("NMRP"). As a result of NBME's failure to provide accommodations, Ramsay's graduation and hence her

ability to begin employment as a medical resident, and eventually as a physician, have been delayed, and she has permanently lost and will continue to lose income as a result.

34. Ramsay has also suffered from humiliation and embarrassment as a result of being denied reasonable accommodations and therefore failing the Step 1 examination, and any further delay in receiving accommodations and therefore being able to continue her education will permanently affect her employability and income in the future.

**d. NBME is refusing to provide the accommodations that Ramsay needs because of her dyslexia and ADHD.**

35. On or about November 28, 2016, during her third year of medical school at WMed, Ramsay submitted an application to NBME for test accommodations, namely for “double time” to take the Step 1 examination, *i.e.*, 100 percent additional test time, which was one of the accommodations that she was already receiving from WMed Medical School.

36. With her November 28, 2016 application, Ramsay also submitted various supporting documents required by NBME, including a Personal Statement, and evaluation reports from treating physicians and psychologists. Ramsay submitted reports from Alan Smiy, M.D., who diagnosed her with ADHD in 2010 and recommended a trial of ADHD medication; and Charles Livingston, M.A., a psychologist, who also diagnosed her with ADHD in September 2014.

37. NBME did not respond to the November 28, 2016 request for more than three months. Then, on March 10, 2017, NBME denied Ramsay’s application (“first denial”) in a letter from Michelle Goldberg, Ph.D., Manager, Disability Services (“Goldberg”).

38. NBME permits students to request reconsideration, after denial of a request for accommodations, a process which also is sometimes referred to as an “appeal.” As part of this process, NBME states that students seeking reconsideration must submit “new” information.



39. Ramsay was forced to take the Step 1 examination in July 2017 without accommodations, and without requesting reconsideration at that time, because she did not have time to gather new information, or wait for a new NBME decision without delaying her fourth year of medical school.

40. Ramsay took the Step 1 examination on July 20, 2017. When taken without accommodations, the Step 1 examination is divided into seven “blocks” of 60 minutes each, with up to 40 questions in each block.<sup>1</sup> Because of her dyslexia and ADHD, Ramsay was only able to read about 60 to 70 percent of the questions in each block, and had to enter guesses for the remaining questions without reading them.<sup>2</sup> The passing score set by NBME for the examination was 192, and Ramsay received a failing score of 191. (NBME subsequently increased the passing score for Step 1 to 194.)

41. As a result of failing USMLE Step 1, Ramsay has been required by WMed Medical School to take a leave of absence effective beginning in August 2017. That leave of absence is continuing, and Ramsay’s medical education has already been delayed by about 20 months.

42. After her unsuccessful attempt to pass the USMLE Step 1 examination without accommodations, Ramsay began to prepare a new application for accommodations to NBME.

43. As part of her preparation for a second application, Ramsay obtained an additional evaluation from a neuropsychologist, Alan G. Lewandowski, Ph.D. in Kalamazoo, Michigan. Dr. Lewandowski diagnosed her with ADHD and “learning disability, nonverbal

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<sup>1</sup> See [www.usmle.org/step-1/](http://www.usmle.org/step-1/), “Overview.” A copy is attached as Exhibit B.

<sup>2</sup> NBME informs students that “If unsure about an answer, it is better to guess since unanswered questions are automatically counted as wrong answers.” See Step 1 Sample Test Questions, found on the Internet at [www.usmle.org/pdfs/step-1/samples\\_step1.pdf](http://www.usmle.org/pdfs/step-1/samples_step1.pdf).

(abnormal scanning and processing speed),” a disability which is related to and which supports the diagnosis of dyslexia.

44. As part of her preparation for a second application, Ramsay also obtained an evaluation from a psychiatrist, Bruce Ruekberg, M.D., also in Kalamazoo, Michigan, who diagnosed her with ADHD Combined Type (DSM-5 314.01; ICD-10 F90.2); and specific learning disorder of “abnormal scanning and processing speed” (ICD-10 F81.9) with impairments in reading (DSM-5 315.00; ICD-10 F81.0) and written expression (DSM-5 315.2; ICD-10 F81.81).

45. As part of her preparation for a second application, Ramsay also obtained documentation for two medical problems that she experienced during the Step 1 examination in July 2017, namely: migraine with aura; and deep vein thrombosis (“DVT”). “Migraine with aura” (also called classic migraine) is a headache that strikes after or along with sensory disturbances called aura. DVT is caused by a blood clotting disorder. Ramsay obtained a report from her treating physician, Jennifer Houtman, M.D., who confirmed Dr. Lewandowski’s and Dr. Ruekberg’s diagnoses, and also confirmed Ramsay’s diagnosis of “migraines with aura,” and “clotting disorder with recent Deep Venous Thrombosis.”

46. Ramsay submitted her new application on or about June 7, 2018.

47. Once again, NBME did not respond to Ramsay’s application for more than 3 months.

48. On September 11, 2018, NBME denied Ramsay’s second application for extended testing time (“second denial”) in a letter to Ramsay, signed by Catherine Farmer, Psy.D., Director, Disability Services (“Farmer”).

49. NBME's September 11, 2018 letter did grant Ramsay's other requests, namely the request for extended break time, and the request for a "separate testing room in which you may stand, walk or stretch during exam." NBME also stated that Ramsay had "permission to read aloud." NBME's letter stated that these requests were granted on the basis of "documentation of a history of DVT and migraines."

50. However, NBME did not grant any accommodations based on the diagnoses of dyslexia and ADHD that Ramsay submitted.

51. The accommodations that NBME did grant – extended break time, a separate testing room, and permission to read aloud – are not sufficient to enable Ramsay to take the USMLE step examinations on an equal basis with students who do not have disabilities, because she has dyslexia and ADHD which affect her reading speed, and comprehension of the written word.

52. Ramsay therefore consulted with a neuropsychologist, Dr. Robert Smith ("Dr. Smith"), for the purpose of having a further evaluation of her reading and attentional problems.

53. Dr. Smith is a licensed psychologist, Michigan License # 6301003249, who received the degree of Doctor of Philosophy in Counseling Psychology from Michigan State University in 1984. Dr. Smith has more than 25 years of experience with neuropsychological assessment of children and adults.

54. Ramsay met with, and was evaluated and tested by Dr. Smith, at his office, on September 25, 2018. A copy of Dr. Smith's report of his evaluation of Ramsay is attached hereto and incorporated herein by reference as Exhibit C.

55. Based upon the in-person evaluation, and diagnostic testing as described in his report, Dr. Smith diagnosed Ramsay with “Specific Learning Disorder with impairment in reading (developmental dyslexia): reading comprehension, severely impaired reading rate and fluent word recognition,” DSM-5 315.00 and ICD-10 F81.0.

56. Based upon his in-person evaluation, and diagnostic testing as described in his report, Dr. Smith also diagnosed Ramsay with Attention-Deficit/ Hyperactivity Disorder Combined Presentation,” DSM-5 314.01 and ICD-10 F90.2.

57. In his report, Dr. Smith explained that, on prior examinations such as the ACT and MCAT, Ramsay was able to use mitigating strategies to answer many questions without having to completely read the question. On the MCAT and prior standardized examinations, Ramsay could sometimes answer multiple choice questions by reading only the answer choices, and not reading the prompt:

[S]he relied on strategies suggested by her Princeton Review instructors in addition to her own established methods to compensate for her ADHD and difficulties with reading and writing. Like she had done for prior standardized tests, her Princeton Review instructors suggested that Jessica not read the passages until she had first answered all the questions she could without reading the passage. Only then with any remaining time, she could go back and try to answer the passage-dependent questions starting with the shortest passages. Finally, with the last minute, it was recommended that she randomly fill in answers to any questions she wasn't able to get to.

Smith Report at 7.

58. Dr. Smith's report also demonstrates why double or 100% extended testing time is the appropriate accommodation for Ramsay, as opposed to any lesser amount. Using standardized assessment measures which are widely used and generally accepted for such assessments, Dr. Smith found the following:

a. Ramsay's WAIS-IV<sup>3</sup>-Processing Speed Index is at the 8th percentile, *i.e.*, is greater than only 8 percent of same-aged individuals, a score which is 53 points (3.5 standard deviations) below her GAI<sup>4</sup> score of 132. Smith Report at 10.

b. Ramsay's WIAT-III<sup>5</sup> Oral Reading Fluency is at the 1st percentile. Smith Report at 16 and 18.

c. Ramsay's WJ4<sup>6</sup> Reading Rate is at the 1st percentile. Smith Report at 21.

d. Ramsay's WJ4 Reading Rate Cluster score of 66 is in the Far Below Average range, range which is higher than only 1% of other individuals her age. Smith Report at 21.

e. Ramsay's GORT-5<sup>7</sup> Fluency is at the 2nd percentile. Smith Report at 22.

f. Ramsay "was only able to attempt 47% of the Nelson-Denny<sup>8</sup> Comprehension items during the standard time limit." Smith Report at 30.

59. In addition to the evidence of Ms. Ramsay's slow reading speed and distractibility, her need for additional extended time is shown by two of the accommodations which NBME has already granted – namely, a separate testing room in which Ms. Ramsay “may stand, walk or stretch” during the examination, and “permission to read aloud.” If Ms. Ramsay needs to “stand, walk or stretch” and “read aloud” during the examination, as NBME has

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<sup>3</sup> Wechsler Adult Intelligence Scale – 4th Edition.

<sup>4</sup> General Ability Index, which is calculated from the Verbal Comprehension Index and the Perceptual Reading Index.

<sup>5</sup> Wechsler Individual Achievement Test – 3d Edition.

<sup>6</sup> Woodcock Johnson IV Tests of Achievement.

<sup>7</sup> Gray Oral Reading Tests – 5th Edition.

<sup>8</sup> Nelson Denny Reading Test.

recognized, then NBME must also recognize that these compensatory strategies require more time. NBME must grant the additional time which is needed.

60. Ramsay submitted an “appeal” / “request for reconsideration” to NBME on December 12, 2018 which included Dr. Smith’s report.

61. NBME responded to Ramsay’s appeal in a letter dated February 14, 2019 (“third denial”), a copy of which is attached hereto and incorporated herein by reference as Exhibit D.

62. NBME’s third denial admitted that Ramsay’s “scores on timed reading tests administered for the purpose of requesting test accommodations” were “exceptionally low.”

63. The only reason stated in NBME’s third denial, for disregarding Ramsay’s “exceptionally low” scores, was that her “average and above average range performances on timed standardized tests taken for the purpose of gaining admission to college and medical school demonstrate that [her] skills are better than most people in the general population,”

64. NBME’s third denial paraphrased Dr. Smith’s comment that Ramsay had “relied on strategies such as answering questions before reading the passages” when she took the prior standardized tests, and NBME characterized such strategies as “a common strategy recommended by prep courses and utilized by savvy students.” Thus, NBME implied that since Ramsay utilized compensatory strategies on prior examinations, she did not need the reasonable accommodation of extended testing time that she requested for the USMLE Step examinations.

65. NBME’s third denial also ignored Ramsay’s own explanation, in the Personal Statement required by NBME and submitted as part of her request for accommodations, that:

“The NBME and USMLE exams are different from the standardized exams I took before medical school. For these exams, I must read the entire prompt for each of the questions in order to gather all of the information necessary to correctly decide on an answer. This requires far more reading than either the ACT or the MCAT did. To have the same opportunity as the other students taking this exam to read and gather the

necessary information from each prompt, I need the accommodations that I am requesting.”

Personal Statement at 3.

66. In citing Ramsay’s use of mitigating strategies, as justification to deny Ramsay’s request for accommodations, NBME’s third denial violated the ADA as amended, under which NBME is required to disregard “learned behavioral . . . modifications,” like the strategy of “answering questions before reading the passages” in order to mitigate a reading disability. 42 U.S.C. §12102(4)(E)(i)(IV).

67. Neither Goldberg who signed NBME’s first denial, nor Farmer who signed NBME’s second and third denials, nor any other employee or consultant of NBME, have ever interviewed Ramsay in person.

68. On March 19, 2019, Ramsay’s attorney wrote to NBME and requested further reconsideration of NBME’s second and third denials of Ramsay’s request for accommodations. A copy of the March 19, 2019 letter from Ramsay’s attorney, marked Exhibit E, is attached hereto and incorporated herein by reference.

69. The March 19, 2019 request to NBME for further reconsideration stated, among other things that: (a) NBME had summarily refused to consider the information in the Smith report; (b) NBME’s wrongful denial was based on Ramsay’s use of mitigating measures during prior examinations, a consideration which the ADA expressly forbids; (c) NBME had wrongfully refused to grant Ramsay the reasonable accommodation of extended testing time on the basis of NBME’s irrelevant and erroneous contention that “all” students benefit from extended time; and (d) Dr. Smith’s evaluation results and report demonstrated that Ramsay was entitled to the accommodation of 100 percent extended testing time which she had requested.

70. On March 27, 2019, NBME responded to the March 19, 2019 request for further reconsideration with an e-mail signed by Farmer (“fourth denial”). A copy of NBME’s fourth denial, marked Exhibit F, is attached hereto and incorporated herein by reference.

71. NBME’s fourth denial merely repeated in summary fashion the content of NBME’s third denial, and NBME continued, and has continued, to deny Ramsay the requested reasonable accommodation of extended testing time for the Step 1 examination.

**e. How Ramsay is harmed by NBME’s refusal to provide extended testing time as an accommodation.**

72. Ramsay has suffered and, unless NBME is enjoined and restrained from continuing to wrongfully deny extended testing time as a reasonable accommodation for her disabilities, will continue to suffer immediate and irreparable harm, for which there is no adequate remedy at law, in that:

a. Ramsay cannot continue with her medical education until and unless she passes USMLE Step 1.

b. Until and unless Ramsay can pass USMLE Step 1, her medical education will continue to be delayed, and her ability to eventually be licensed as a physician will be endangered.

c. If Ramsay receives appropriate accommodations and passes USMLE Step 1 now, her graduation will still be delayed until at least June 2020, which is two years later than she could have graduated if she had received appropriate accommodations and passed USMLE Step 1 in 2017.

d. Unless Ramsay is provided with the reasonable accommodation of extended testing time, her score on Step 1 will not accurately reflect her level of knowledge and will adversely affect her chance of being accepted into a medical



residency program through the National Residency Match Program (“NRMP”), or otherwise, which is a precondition for licensing as a physician.

e. USMLE scores are heavily weighted in the NRMP process, and placement in a selective residency program is a major determinant for eventual professional success as a physician. Unless and until NBME provides Ramsay with all of the accommodations which she needs to take the USMLE Step examinations on a fair and equal basis with other students, any eventual placement in a residency program will be adversely affected.

f. Ramsay will also need extended testing time as a reasonable accommodation for subsequent USMLE Step examinations, namely, USMLE Step 2-CK, Step 2-CS, and Step 3. The USMLE Step 2-CK and Step 3 examinations are even more reading intensive than Step 1. For example, on practice tests for USMLE Step 2-CK, taken with standard time, Ramsay has generally been unable to read even 50 percent of the questions. The USMLE Step 2-CS examination also requires the student to write notes based on a simulated patient examination, for which Ramsay also requires extended time.

g. On information and belief, NBME generally refuses to provide extended testing time on subsequent step examinations, for a student who receives a passing score on an earlier step examination without extended time. Thus, even assuming that Ramsay were to be able to pass Step 1 with a minimal passing score, the effect would be to further diminish her chance to obtain the extended testing time that she needs for USMLE Step 2-CK, Step 2-CS, and Step 3.

h. If Ramsay fails to pass any of the USMLE step examinations, or is unable to obtain scores that allow her to fully demonstrate her ability and knowledge, she may be unable to be licensed as a physician.

**COUNT I – VIOLATION OF THE ADA**

73. Plaintiff incorporates the preceding paragraphs herein by reference.

74. Ramsay is an individual with disabilities within the meaning of the ADA. 42 U.S.C. §12101 *et seq.*,

75. Ramsay meets all the eligibility criteria for USMLE Step 1 and, upon successful completion of Step 1 and other requirements, USMLE Step 2-CK, Step 2-CS, and Step 3.

76. Ramsay is a qualified individual with a disability.

77. Ramsay needs appropriate testing accommodations to participate in the USMLE Step examinations on a fair and equal basis.

78. The ADA requires NBME to offer these examinations in a manner accessible to persons with disabilities. 42 U.S.C. §12189.

79. Title III of the ADA states in pertinent part, “a failure to make reasonable modifications in policies, practices, and procedures when . . . necessary to provide such services . . . to individuals with disabilities” constitutes discrimination. 42 U.S.C. §12182(b)(2)(A)(ii).

80. Regulations issued by the United States Department of Justice, pursuant to the ADA and applicable to NBME, require that “Any private entity that offers examinations or courses related to applications, licensing, certification, or credentialing for secondary or postsecondary education, professional, or trade purposes shall offer such examinations or courses in a place and manner accessible to persons with disabilities.” 28 C.F.R. §36.309(a).

81. The Department of Justice regulations also require that NBME must “assure” that:

(i) The examination is selected and administered so as to best ensure that, when the examination is administered to an individual with a disability that impairs sensory, manual, or speaking skills, the examination results accurately reflect the individual's aptitude or achievement level or whatever other factor the examination purports to measure, rather than reflecting the individual's impaired sensory, manual, or speaking skills (except where those skills are the factors that the examination purports to measure).

\* \* \* \*

(v) When considering requests for modifications, accommodations, or auxiliary aids or services, the entity gives considerable weight to documentation of past modifications, accommodations, or auxiliary aids or services received in similar testing situations. . . .

(vi) The entity responds in a timely manner to requests for modifications, accommodations, or aids to ensure equal opportunity for individuals with disabilities.

28 C.F.R. §36.309(b)(1). By wrongfully denying Ramsay's requests for extended testing time, NBME has failed to "best ensure" that the examination results "accurately reflect [her] achievement level," has failed to give any weight to documentation of past accommodations, and has failed to respond in a timely manner to Ramsay's requests.

82. By disregarding the reports of Ramsay's prior neuropsychological assessments, and particularly the recent assessment by Dr. Smith, NBME has also disregarded written guidance from the Department of Justice which states that "[r]eports from experts who have personal familiarity with the candidates should take precedence over those from, for example, reviewers for testing agencies, who have never personally met the candidate or conducted the requisite assessments for diagnosis and treatment." 28 C.F.R. pt. 36, app. A, at 796.

83. Defendant has discriminated, and continues to discriminate against Plaintiff on the basis of her disabilities by denying her an equal opportunity to demonstrate her aptitude and

achievement level on the USMLE step examinations in violation of the ADA, specifically 42 U.S.C. §§12182, 12189 and 28 C.F.R. §36.309.

**COUNT II – VIOLATION OF THE REHABILITATION ACT**

84. Plaintiff incorporates the preceding paragraphs herein by reference.

85. Section 504 of the Rehabilitation Act, 29 U.S.C. §794, prohibits discrimination against people with disabilities in any “program or activity receiving Federal financial assistance.” NBME is such a program, and the USMLE step examinations are such an activity.

86. NBME’s refusal to grant Ramsay the reasonable accommodation of extended testing time for the USMLE step examinations is a violation of Section 504.

WHEREFORE, Ramsay demands judgment against NBME as follows:

A. For preliminary and permanent injunctions enjoining and restraining NBME from refusing to grant Ramsay the reasonable accommodation of 100% extended testing time (double time) for the USMLE Step 1 examination;

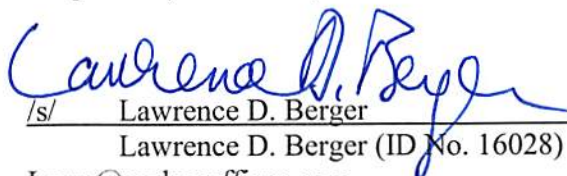
B. For preliminary and permanent injunctions requiring that, for purposes of the USMLE Step 2-CK, Step 2-CS and Step 3 examinations, NBME should evaluate Ramsay’s request for testing accommodations based upon her having received 100% extended testing time (double time) for the USMLE Step 1 examination, and with due consideration for the evaluations of her disabilities which NBME has wrongfully ignored;

C. For a Declaratory Judgment that Ramsay has the right to receive testing accommodations from NBME for each of the USMLE step examinations, including 100% extended testing time;

D. For the damages she has sustained as the result of NBME’s prior wrongful refusals of testing accommodations, and as a result of NBME’s unreasonable delays in responding to Ramsay’s request for testing accommodations;

- E. For the costs of suit, including reasonable attorneys' fees; and
- F. For such other further relief as the Court shall deem just.

Respectfully submitted,

  
/s/ Lawrence D. Berger

Lawrence D. Berger (ID No. 16028)

[Larry@rcglawoffices.com](mailto:Larry@rcglawoffices.com)

REISMAN CAROLLA GRAN & ZUBA LLP

19 Chestnut Street

Haddonfield, NJ 08033

(856) 354-0021

Attorney for Plaintiff

Of Counsel:

Mary C. Vargas (ID No. 324005)

Michael S. Stein

STEIN & VARGAS LLP

10 G Street NE, Suite 600

Washington, DC 20002

(202) 248-5092

Dated: May 8, 2019

June 6, 2018

USMLE# 5-366-431-4

Jessica Ramsay

**Personal Statement**

I am submitting this Personal Statement to describe the functional impairments and symptoms I experience as a result of my learning disabilities, Attention Deficit/Hyperactivity Disorder, migraines, and residual symptoms from my deep vein thrombosis. These symptoms make it impossible for me to fully read and answer all of the questions on an equal basis with non-disabled students under the standard testing conditions. The accommodations that I am requesting are:

- 100% additional exam time (double time)
- Extra break time
- a private, distraction-reduced testing room

\* \* \*

There are many tasks in everyday life that require scanning, reading, writing, information processing, recall, and organization, which the average person does effectively and efficiently. Because of my disabilities, I am unable to do these important tasks with normal effectivity or efficiency, or sometimes even at all. These disabilities also interfere with my ability to learn, remember, recall, and express information efficiently and effectively. In order to perform any of these functions, I must spend much more time and energy every day than most people need to. Furthermore, the additional time and energy spent on these tasks takes away from the time, energy, and focus needed to manage other important life responsibilities like cooking, eating, cleaning, paying bills, running errands, doing laundry, sleeping, and self-care.

In addition, the methods I have developed over time in order to be able to read, study and manage my disabilities are only effective if I have an appropriate space and the necessary time. Let me explain.

- I have always struggled with flipping, merging, and tangling letters, characters, and words both when reading and writing. I also have trouble distinguishing between words and characters that have similar shapes – characters such as qbdp, 96, wunm, JL, 3E, gy, 5sae, 4A, and words like united/untied, serves/verses/reverse/server/severe/reserve, quite/quiet, from/form, reared/reread, and though/thought/through/trough/tough – so it takes me a long time to isolate and correctly identify them. Sometimes I am unable to tell them apart without help from others or use of supportive tools. These tasks are progressively more difficult with stylized fonts, handwriting, and cursive – *mmmmmmmm, zzzzz, delbkk* – which I usually need someone else to read to me because I cannot read it on my own. This interferes with my ability to do many common, everyday tasks like reading handwritten instructions, phone numbers, reminders, or feedback on an assignment, and sometimes cannot even read something I wrote myself, like reminders or class notes.
- In order to read anything, especially technical material like the material on the USMLE Step 1 test, I must spend a lot of time and effort to untangle the words and decode each one, identifying their individual meanings. Then I must piece them together in the correct sequence, building them up to get the meaning of the text as a whole. This process requires me to reread text multiple times before I can fully comprehend what I am reading. Usually, I also need to read the text aloud, or have it read to me by a person or computer program, to help me

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interpret the words within the context of the sentence, and then within the paragraph. Hearing the words aloud also helps me to avoid making as many mistakes overall because, when I hear something that sounds out of place, I can backtrack and try again. Though this process is very slow and tedious, it makes it possible for me to read with adequate comprehension. Additionally, there are times when I also need to physically act out or demonstrate what I am reading so that I can make sense of the information. This technique is helpful for working through information but requires adequate time and an appropriate space for me to be able to physically move around in a way that is not possible in a shared testing room without disturbing other examinees.

- When I need to read but do not have adequate time or support to properly untangle and work through the words or process the information, I miss important details, or even large chunks of information, and misinterpret the message. This leads to many, and often crucial, misunderstandings and communication errors that can have negative impacts on the personal, social, academic and professional aspects of my life, the severity of each varying depending on the situation. For example, calling someone Ashley when their name tag says Ainsley can appear careless, or even rude, leading to a bad first impression, or even loss of a potential job offer. Misreading instructions and messages, subsequently causing me to pass along an incorrect message or to unintentionally fail to follow directions, has gotten me in trouble at home, with friends, and sometimes even at work. In restaurants, it takes me a long time to read the menu, so I hold everyone up when they are ready to order. When movies and shows have subtitles, they are not on the screen long enough for me to be able to read them, so I either need someone to read the captions to me or I have to pause the movie with every line so that I can give myself adequate time to read each line, which really annoys other viewers. When I do not have someone to read the captions to me, or the option to pause so I can read, I completely miss what is going on.
- When I need to read for complete understanding and learning, I mark up the text by drawing and writing directly on the page with colored pens, pencils, and highlighters. When I am not able to use colors to draw and write directly on the exam, such as for computerized exams including USMLE Step 1, I must rely on a combination of other methods, though this is generally less effective. The following are some examples of these methods:
  - Drawing and writing on scrap paper, which is less effective because I have to go back and forth between the text and scrap paper, causing me to more frequently lose my place and make mistakes. It is also much less efficient because it takes much more time to go back and forth between text and scrap paper than it does to mark directly on the text, and I require more time to check for and correct my mistakes;
  - Reading and thinking aloud which allows me to hear the words as I read to better comprehend and process the information and, importantly, to better recognize when I have made sequencing errors. This method requires a private environment so as not to interrupt other test-takers when I am talking;
  - Physically acting out or demonstrating what I am reading. This helps me to make sense of the information I am reading but requires adequate time to work through the information. Without a private room in which I can read aloud and move about the room, I will be a hindrance and distraction to other test takers.

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My learning disabilities also impair my ability to effectively and efficiently express information through writing due to the switching, merging, and tangling of letters, characters, and words, similar to that which I experience while reading. Because this is a request for accommodations for Step 1, I will not describe my difficulty with writing in as much detail, but it will be relevant when I apply for accommodations for Step 2 CS.

Because reading and writing are such tedious and draining processes for me, I avoid both as much as possible. I was able to do this strategically for some prior standardized tests like the ACT and MCAT because the tests were designed so that many of the questions could be answered without reading the whole question. For the ACT, I was not able to read all of the questions and could not accurately demonstrate my knowledge. Additionally, due to the guessing penalty, I had to leave the questions I was not able to read unanswered. However, because most of the questions required little reading to find the answers, I was able to answer enough questions to achieve an acceptable score. Likewise, for the MCAT, many of the questions could be answered without reading and gathering information from the passages, so I knew to answer passage-independent questions first, and then used any time left to try to read the passages with the most unanswered questions remaining. Being able to skip much of the reading made it possible for me to correctly answer enough questions to achieve an acceptable score.

The NBME and USMLE exams are different from the standardized exams I took before medical school. For these exams, I must read the entire prompt for each of the questions in order to gather all of the information necessary to correctly decide on an answer. This requires far more reading than either the ACT or the MCAT did. To have the same opportunity as the other students taking this exam to read and gather the necessary information from each prompt, I need the accommodations that I am requesting.

In other non-testing situations, I can use videos, pictures, diagrams, interactive models, physical demonstrations, dictation, audio books, conversations, context clues, lectures, and many other sources in addition to, or even in place of, reading and writing. These sources format information in a way that I can understand, process, remember, and use more effectively and efficiently, making it easier for me to process, learn, study, communicate, and demonstrate information. When I am required to read or write without the option or opportunity to use these other formats, I require much more time and support than most people, and I am not able to understand, learn, study, memorize, or communicate information, nor demonstrate my knowledge and competency as effectively.

\* \* \*

In addition to ADHD, learning disabilities, and migraines, I also had a deep vein thrombosis (DVT) the full length of my leg in 2016 and was later diagnosed with a clotting disorder (See letter from Jennifer Houtman, M.D.). The DVT damaged the circulation in my legs, causing post-thrombotic syndrome, meaning that sitting or standing still for long periods causes my legs to swell and become painful, which adds to my inability to focus. During my Step 1 attempt, having to sit still for long periods without a private environment to briefly move or walk around as necessary to maintain circulation during the exam blocks caused my leg to swell and become painful, further distracting me from the exam. During the breaks, I did not have enough time to sufficiently walk around to reduce the swelling and pain that had built up during the exam. Because of my clotting disorder and DVT, I must take frequent breaks throughout the day, and briefly during the exam blocks, to move and walk around in order to maintain adequate circulation in my legs, reduce swelling and pain, and decrease the risk of forming another DVT as a result of my clotting disorder.

ADHD inhibits my ability to focus or maintain attention, especially for extended periods, and causes me to be very easily distracted by sounds, movement, and flashes of light, as well as my own thoughts and sensations, like hunger, restlessness, pain, and temperature. These distractions pull my focus away from my current



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thought or task. As a result, ADHD impairs my ability to do anything that requires sustained mental effort, such as thinking, maintaining conversation, remembering obligations and assignments, getting organized, staying on track, and completing tasks and projects.

I am unable to keep track of things because I set them down and forget where I put them, which is especially problematic when I am outside my home, and with important things like my, wallet, keys, assignments, phone, and legal documents. In addition to distractibility and inattention, ADHD also causes me to be impulsive, which makes it difficult to wait my turn, especially in conversations. As a result, I unintentionally interrupt others, or blurt out my thoughts before fully thinking them through or appropriately filtering them for the situation.

The restlessness, distractibility, and inability to focus caused by my ADHD exacerbate the effects of my learning disabilities, further impairing my ability to scan, read, write, learn and process information.

My inattention, distractibility, and impulsivity make it very difficult to focus on just one idea at a time, causing me to jump quickly from one thought to another, which makes it difficult to maintain my train of thought. This frequently causes me to forget things I need to do, forget steps in a process, forget what someone just told me, and forget what I am saying when I am talking. My inattention, distractibility, and impulsivity also cause me to be unable to organize my thoughts without the adequate time or the tools I need. This is especially true for things like telling stories or writing essays and clinical notes, which must be logically presented to others.

For exams, getting lost in my thought process causes me to lose track of what the question is really asking so that I end up working only part way to or even past the answer the question was actually asking for. Many times, on multiple choice exams, the answer that I come up with is often one of the incorrect options. Without adequate time to reread the question and double check that the answer I select fits what the question is really asking, I am unable to effectively answer questions even when I correctly understand the material.

Also due to my ADHD, I constantly need to be moving around or doing something. I have always had an extremely difficult time sitting still, especially for extended periods. When I am expected or required to sit for prolonged periods, I become very restless and start shifting around in my seat, fidgeting, and doodling on my papers, which can be disruptive to others around me and has gotten me in trouble in school. Not being able to sit still for extended periods interferes with my ability to study and work on assignments, maintain professional behavior at work, and complete tasks or even watch shows to relax at home. Being able to take frequent breaks with adequate time to rest my mind while stretching and walking around helps me manage my restlessness and recharge so I have the energy focus and try to sit still when I get back to the task at hand.

I also need frequent breaks with adequate time to give my mind a rest from straining to focus and read. If I do not have adequate opportunities or time to do this, I become overly fatigued, which exacerbates the symptoms I experience related to my learning disorders and ADHD. Taking frequent breaks to give my mind a chance to rest allows me to recover before the next block so that I have the energy I need to be able to focus, read, process and remember information, and demonstrate my knowledge.

Additional break time will also help me with avoiding migraine symptoms. When I get migraines, the associated blind spots affect my ability to see and therefore to read. The headache itself, along with the associated nausea and hypersensitivity to light, sound, and temperature make it impossible for me to focus, which interferes with my ability to read, think, process, and answer questions. Because my migraines are triggered by excessive fatigue from trying to focus, read, and process the questions, having frequent breaks with adequate time to recuperate between blocks reduces the likelihood that I will get a migraine during the exam.

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During my first Step 1 attempt, the standard break time allowed did not provide enough time after basic needs had been addressed for my mind to adequately recover between blocks. As a result, the effort needed to focus on the exam and suppress urges to move over the course of the exam cause me to become fatigued, triggering a migraine. I began experiencing aura symptoms during the 6<sup>th</sup> block, disrupting my focus and interfering with my ability see, read, and think, and had to wait until the block was over to use the remaining break time to retrieve and take my medications. Having to wait almost a full hour after experiencing aura symptoms before I could take the abortive medications, the aura developed into a full migraine during the 7<sup>th</sup> block, which further impaired my ability to concentrate, see, read, and think.

If I start experiencing migraine aura symptoms, I need to take medications right away to avoid getting a full migraine. The process of retrieving and taking medications during my breaks takes away from the time I need to manage my restlessness and get re-energized and refocused before the next block (*See letter from Jennifer Houtman, M.D.*).

Additionally, during breaks, I also need adequate time to stretch, move, and walk around to reduce the restlessness and leg swelling and pain I experience during the exam. Having adequate time to address these symptoms helps me get refocused before starting next block.

The standard exam space is a problem in many ways. When in the room, examinees are required to remain seated and to refrain from activities that might distract other test-takers, such as moving, tapping, or talking. In order to abide by these rules and respect the other examinees in the shared testing space, I cannot use the supportive tools and methods I require to effectively read or interpret the questions because I am not allowed to read or think aloud or briefly step away from my computer in order to make sense of question.

Sharing the space with other test-takers also significantly increases the distractions I experience during my exam, further impairing my ability to focus. If I cannot focus, I cannot read, process or recall information, nor organize my thoughts effectively. As expected, this is what I experienced during my first Step 1 attempt. Additionally, throughout several blocks, many people in the room were required to type for their exam and were typing so furiously that my desk was shaking, which completely inhibited me from being able to focus on my exam or read the questions. I could not understand the words on the screen and I could not think through anything. The effort I spent trying to focus and read during this time caused me to fatigue even more, contributing to the migraine I developed in the last two blocks.

Also, to avoid disrupting other test-takers in the standard shared testing space, I must continuously suppress the urges to get up, move around, and fidget, which greatly increases the restlessness, stress, and fatigue I experience during the exam. Additionally, while sharing a testing space, I cannot adequately manage the restlessness, swelling or pain caused by sitting for long periods because I am not allowed to briefly stand up to move, stretch, or walk around.

Additional break time, and a private room, will be helpful, but not enough, unless I also have extended testing time. As I have explained, I am easily distractible and have learning difficulties that cause me to be a very slow reader, with slow processing speed and inefficient thinking, compared to the average person. I require additional time and tools to be able to untangle and process words, effectively interpret and understand what I am reading, to organize my thoughts and information, and get back on track after distractions.

During my first Step 1 attempt, like my previous unaccommodated testing experiences, I did not have enough time to read all of the questions and, in the last minute of each block, was forced to blindly select answer choices for a significant number of un-read questions. Additionally, because I was rushed to get through as many questions as possible during the allowed time for each block, I did not have enough time to thoroughly

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analyze and process many of the questions, or to organize my thoughts before having to select an answer. Since I cannot mark directly on the exam, I more frequently lose my place, misinterpret the question, and forget or misunderstand what the question is really asking. For example, If I misread a question as 'which thing is expected to **DE**crease due to a disease process,' when the question is actually asking 'which thing is expected to **IN**crease,' I will get the question wrong even though I understand how the disease process works. To be able to effectively read and understand the questions, I need to have sufficient time to untangle and process the words, to use supportive methods, and to re-read questions. When I am reading and thinking aloud, I need to have sufficient time and a private environment so that I am not a disruption and hindrance to other test-takers.

Double exam time gives me the opportunity to use the methods and supports I require to effectively read through each question while compensating for effects of my learning disabilities. I need this time to ensure I have the opportunity to read, understand, and gather information from each question; to apply my knowledge and preparation to process the information and decide on an answer choice; and to distinguish between answer choices so I can select the appropriate answer choice for my intended answer.

Double exam time also gives me adequate time to get refocused after getting distracted and to manage the additional symptoms caused by ADHD and post-thrombotic syndrome. Without this time, these symptoms interfere with my ability to focus, and taking time to appropriately address them takes time away from the time I need to read and process the questions.

\* \* \*

My learning disabilities, ADHD and migraines affect all aspects of my life, and I have been struggling with them since I was little. Since beginning school, I have always had a lot of trouble sitting still and focusing, which interferes with my ability to pay attention in class, study, and complete homework, class assignments, papers, and exams, especially under timed conditions. My distractibility, lack of focus, and difficulty with letter reversals and tangled words causes me to make a lot of mistakes that would have been avoidable for most people. This has always been extremely frustrating because I would understand the material and would put a lot of effort into my work but would still miss tons of points for "careless" mistakes. Additionally, it has always taken me significantly more time and effort than everyone else to read, write, and process the information, so that I rarely have time or energy for anything else. In time-limited situations, like exams, I almost never have the opportunity to completely and accurately demonstrate my knowledge or hard work because I do not have enough time or access to the supports I need to adequately read, process, and answer each of the questions.

Growing up, my friends would always get mad at me for not being able to hang out in the evenings because they did not believe that I was still doing homework when they had already been done for hours. They always seemed to have so much free time when I was constantly up past midnight trying to finish my homework. In middle and high school, my mom would get frustrated when I was trying to write a paper because it would take me FOREVER and we only had one computer in the house, and she would always have to help me proof-read my work, many times at three or four in the morning. Because I am such a slow reader, whenever I had to read something online, it would take me so long that I would get yelled at for tying up the phone line (we had dial-up service at that time).

Prior to college, my parents and teachers never pursued evaluation for learning disabilities or ADHD because I worked hard and was able to mask my mistakes at school. After using my energy to concentrate on these tasks, I was always mentally exhausted at the end of the day. At home, having two brothers who have autism and multiple other special needs created an inaccurate comparative illusion that I could pay attention, sit still,

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read, process, study, organize, and write normally. But the reality was that I was spending a very abnormal and excessive amount of time and effort to perform or work around these functions every day.

In 2<sup>nd</sup> grade, my teacher did notice that I still had trouble with letter and number “reversals” and distinguishing between similar-appearing characters and words when reading and writing. She began providing informal accommodations which included putting me at an isolated desk in a cubicle in the corner of the room to help reduce distractions, gave me extra time to complete classwork, and provided an alphabet chart to help me keep my letters straight for reading, writing, and spelling assignments.

After I was trialed on glasses, which did not help, I was referred to a therapeutic optometrist, Dr. Mary Alice Tanguay, to be evaluated for my “reversals.” She identified my “substantial deficits in the areas of visual-spatial relationships and visual discrimination.” In 1998, Dr. Tanguay provided visual perceptual skills training. This training did not eliminate my difficulty with character reversals, tangling, identification or discrimination, nor with spelling or reading speed. The training only helped me to develop some skills that I still use to work around the effects caused by my now formally diagnosed learning disabilities, which accounts for the improvements in the measured visual perceptual skills Dr. Tanguay mentions in her 2000 summary letter. Importantly, Dr. Tanguay also noted that even with these improved skills, I would likely always be a slow reader. Other than this visual testing, I was not evaluated for learning disabilities until 2009, and so did not receive any other formal aid or accommodation.

The effort required for me to focus and to suppress impulses so that I could sit still, pay attention in class, and avoid interrupting people has caused me to get frequent headaches since I started going to school. In third grade, when reading and writing became more prevalent, the added effort from trying to read and write for prolonged periods in addition to concentrating and sitting still started causing me to have daily migraines. Because the associated blind spots, nausea, and hypersensitivity to light, sound and temperature inhibited my ability to participate in school, I was given prophylactic treatment for about a year until the frequency of migraines decreased. When I started medical school, the increased time and effort required for me to meet expectations and complete requirements caused me to again have daily migraines requiring prophylactic treatment.

Throughout my academic career, I have required informal accommodations in order to complete and pass assignments and exams so that I could advance through school. Timed tests have been my downfall in all of my classes, because I do not have time to read and process the questions, or accurately demonstrate my knowledge and preparation, which makes me look unprepared and feel incredibly stupid. I distinctly remember a timed, multiple-choice test in 5<sup>th</sup> grade, on which we had to get at least 30 out of 60 questions right. All but one other person finished early. I was the only person to answer less than 30 questions. I had only been able to get through 29 of them and was working on the 30<sup>th</sup> when time ran out. I went home crying because I felt stupid and slow. I told my mom that I *knew* how to do all the questions, but I just did not have enough *time*. Eventually, they made informal accommodations for me by grading the work I had shown for the 30<sup>th</sup> question, which was correct and allowed me to achieve the minimum passing score. Similar situations have occurred all throughout my schooling, even several times since I began receiving formal accommodations in college.

My learning disabilities have caused me to struggle with words, making me a slow reader and writer. This is especially problematic in time-limited situations. Since the beginning of my academic career, I have almost never been able to finish assigned readings for any class by the time they were due, even when I would stay up til 3 or 4 in the morning trying to finish. If I wasn't up late trying to read, I was up late trying to write an essay. Many times, I had to pull several all-nighters in a row to get a paper done in time. For *anything* written, not just exams or papers, the process of writing is pure agony for me. Even though I know I can turn out a

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decent final product, the struggle to get there – keeping track of and organizing my thoughts, translating them into words, finding the *right* words to convey the intended meaning, trying to get it all typed out before I forget how I worded it, and then working to get the jumbled mess of words on the paper into a logical, cohesive order, all while on constant lookout for dyslexic errors unnoticed by spell-check – is extremely frustrating and draining, and many times triggers migraines. For these reasons, I have always loathed reading and writing; they are agonizing battles of trying to decipher words and express and organize thoughts on a page, so I avoid doing either when possible.

\* \* \*

During my undergraduate studies at Ohio State University, the demands of school, work and life finally began outweighing my ability to self-accommodate, requiring more time and energy than I had. I was having even more trouble focusing throughout the day. I would repeatedly misplace things and lose track of assignments. I was no longer able to catch and correct the numerous errors I made – like circling “b” instead of “d”; missing the crucial “*not*” or “*least* likely” and ending up with the exact opposite answer; or altogether misunderstanding a question because I mixed up some of the words. I was even having trouble speaking, mixing the beginnings or ends of neighboring words, or just not being able to find the right words at all, which happens much more often when I am fatigued. For many of the tasks, I knew the steps needed to accomplish each task and that I was capable of doing each step, but never had enough time to do them, even if I planned ahead. Despite making a valiant effort, I could not organize everything going on and would often miss a crucial step. It took so much time to do these things that I didn’t have any time left to spend on other important tasks, like paying bills, cooking, cleaning, or activities to maintain my physical, emotional and social well-being.

In 2009, at the suggestion of a professor, I sought help from my primary care physician, Dr. Allen Smiy, who diagnosed me with ADD, inattentive type, for which he began medical management. Before this, I did not associate my restlessness and constant need to be moving with being *hyperactive* – I just thought I was *active*. Dr. Smiy also clinically diagnosed me with dyslexia but did not recommend further work-up because it would not have changed the treatment.

A few months later, I registered with OSU’s Office of Disability Services (ODS) and began receiving formal accommodations in 2010, which included the following:

- Priority class scheduling
- Access to an assigned ODS advisor
- 50% additional testing time, a distraction-reduced testing space, and ear plugs for all quizzes and tests
- Any supportive materials that were recommended or approved by my professors, such as extra scrap paper, colored pencils, highlighters, chemistry model kit, or a note sheet.

Once I started receiving accommodations, I was able to perform better on my exams because I had more time to read, write, and work through questions. Though, even with the extra time and reduced distractions, I still had to rush to try to finish the tests. On exams with essays or questions with lengthy prompts, which require a lot of writing and reading, I still ran out of time before I could finish.

In medical school, I received more accommodations to meet the increased curricular demands. Most notably, I was granted 100% additional testing time, unlimited free printing, and Kurzweil 3000 text-to-speech software.

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I have had to adjust my requests, or make new ones, as I've encountered new situations in the classroom and the clinic. For example, during my 2<sup>nd</sup> year, I struggled to complete simple subjective/objective encounter notes for our OSCE assessments within the 10-minute limit, so was granted 50% additional time for the note-writing. When we started doing Step 2 CS-style encounters and notes for our clerkship OSCEs, I struggled to complete the added writing requirements in 15 minutes, so was granted 20 minutes, with an additional 2 minutes at the beginning of the encounter so that I had enough time to read the encounter prompt and instructions.

The effects that ADHD and learning disabilities have on my life are most quantifiable when assessing my academic performance, but they do not just affect school; for me, they are a 24/7 thing. Growing up, I constantly got in trouble for "being lazy" or "ignoring" directions – failing to do simple things like hanging my jacket in the closet rather than on the back of a kitchen chair, pushing my chair in when I got up from the table, making my bed, or putting things completely away – because no matter how many times my mom asked or what I tried to make myself remember, I always got distracted halfway through, forgot what I was doing and moved on to something else.

Since being diagnosed in 2009, I have gotten better at recognizing my hyperactive and inattentive trend, which has expanded and become more apparent as I have taken on more responsibility as an adult and medical student. I have learned the hard way that it is necessary for me to spend more effort to create reminders, backup reminders, and backup-backup reminders to avoid the negative domino-effects from making repetitive and perpetual "careless" mistakes, such as: forgetting appointments, forgetting to bring things that I need (like my wallet, phone, or paperwork), and losing track of time. However, even with the extra efforts to manage these effects, they are still apparent. For example, I still struggle with impulsively blurting things out without thinking, sometimes interrupting or offending others, and must actively try not to. I still have difficulty getting and staying organized, which is obvious with my cluttered apartment. I still mis-schedule and forget social, work, and academic obligations. I start tasks and projects, get distracted, and leave them unfinished. For example, I frequently forget that I started laundry and will then leave wet clothes in the washer for days before realizing it.

Already struggling to manage my life and having to surrender *much* more time and effort to studying and completing assignments, the learning disabilities intrinsically add a disproportionate number of hoops for me to jump through, such as:

- Remembering to request a new prescription every 30 days so that I can fill it before I run out.
- Taking off from school so that I can have medication checks every three to six months.
- Requesting academic accommodations, which is never a simple process – I have to track down old documentation and get new evaluations, and torture myself with writing support for each request.
- Keeping track of documentation and paying bills for each of these extra things.

These things may seem simple, but the pure nature of the disabilities I struggle with makes managing just one of these tasks, not to mention ALL of them, more difficult and time-consuming than for the average person. Every minute I spend keeping my disability affairs in order is time taken away from family, friends, recreational activities, self-maintenance, sleep and studying.

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For me, managing my life is like having a large bag of balls dropped from the ceiling, all at once, and being expected to not let a single one hit the ground. It is impossible without help. Finally being diagnosed and receiving treatment was like being given a shopping cart to catch more balls in, and receiving academic accommodations, a second shopping cart. Sometimes my friends and family help out – each catching a few more – by reminding me about upcoming deadlines and being patient and understanding when I jump from one thought to the next without finishing the previous one, or when I have to ask what we were just talking about after losing track mid-sentence.

I wish I did not need more time or accommodations, just like I wish I did not have to sacrifice the things I enjoy to make time for things I dread, but I do. In the context of the USMLE Step exams, without appropriate accommodations, I will not have the opportunity to get through as many questions or as much content as everyone else taking the tests, and I will not be able to accurately demonstrate all that I have learned thus far.

Sincerely,

A handwritten signature in cursive script that reads "Jessie Ramsay".

Jessica Ramsay, 06/06/18



# USMLE®

UNITED STATES MEDICAL LICENSING EXAMINATION®

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[Step 1](#)

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Step 1 assesses whether you understand and can apply important concepts of the sciences basic to the practice of medicine, with special emphasis on principles and mechanisms underlying health, disease, and modes of therapy. Step 1 ensures mastery of not only the sciences that provide a foundation for the safe and competent practice of medicine in the present, but also the scientific principles required for maintenance of competence through lifelong learning. Step 1 is constructed according to an integrated content outline that organizes basic science material along two dimensions: system and process.

Step 1 is a one-day examination. It is divided into seven 60-minute blocks and administered in one 8-hour testing session. The number of questions per block on a given examination form may vary, but will not exceed 40. The total number of items on the overall examination form will not exceed 280.

Practice materials, which include Sample Test Items (PDF) and web-based Tutorial and Practice Test Items, as well as other informational materials, are available at the USMLE website. Examinees must also read the [USMLE Bulletin of Information](#).

#### IMPORTANT:

- The term *item* is used to describe a test question in any format.
- You **must** run the web-based Tutorial and Practice Test Items to become familiar with the test software **prior to your test date**.
- The tutorial provided at the beginning of the Step 1 Examination has fewer screens and less detailed information than the Step 1 web-based Tutorial and Practice Test Items on the USMLE website.
- The web-based Tutorial and Practice Test Items on the USMLE website include items with associated audio findings. Become familiar with how these types of test items function before your test date.

Please visit the USMLE website often to view announcements, regarding changes in the test delivery software, and to access updated practice materials. You must obtain the most recent information before taking any USMLE examination.

#### Step 1 Content Description

Read the [Step 1 Content Description](#) and [Sample Items](#)

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A nonprofit organization serving children and adults with dyslexia

## **NEUROPSYCHOLOGICAL EVALUATION**

For Learning Problems

NAME: Jessica E. Ramsay  
AGE: 28 years, 0 months  
SEX: Female  
DATE OF BIRTH: 8/29/1990  
EXAMINATION DATE: 9/25/2018  
REPORT DATE: 11/6/2018  
EXAMINER: Robert D. Smith, PhD  
LICENSE: 6301003249

### **Sources of Information:**

Interview with Ms. Ramsay and her mother, Jerri Shold  
TEST OF MEMORY MALINGERING (TOMM)  
ADULT ADHD-Rating Scale-IV with Adult Prompts  
NELSON-DENNY READING TEST  
WECHSLER INDIVIDUAL ACHIEVEMENT TEST-THIRD EDITION (WIAT-III)  
WOODCOCK-JOHNSON IV TESTS OF ACHIEVEMENT (WJ-4) (Selected subtests)  
GRAY ORAL READING TESTS-FIFTH EDITION (GORT-5)  
SYMPTOM CHECKLIST-90-REVISED (SCL-90-R)  
INTEGRATED VISUAL & AUDITORY CONTINUOUS PERFORMANCE TEST (IVA+PLUS)

### **Records Reviewed**

The following records were made available at the time of this examination:

Alan Lewandowski, PhD, FACPN Neurocognitive Consultation (10/25/2017)  
Alan Lewandowski, PhD, FACPN Neurocognitive Examination (12/7/2017)  
Alan Lewandowski, PhD, FACPN Graphs and Raw Data for Neurocognitive Examination (12/7/2017)  
Bruce Ruekberg, MD, letter supporting accommodations application (6/4/2018)  
Genesis Family Health Center summary of medical history and status (5/17/2010)  
The Ohio State University ADD/ADHD Verification Form (8/13/2010)  
Decision letters of Essential Abilities Committee Request for Reasonable Accommodations (2014-2017)  
USMLE Certification of Prior Test Accommodations (6/1/2018)  
Alan Lewandowski, PhD, FACPN ADDENDUM response for additional information requested by USMLE and NBME (9/2/2016)

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Northern Michigan Center  
681 E. Lake Street  
Harbor Springs, MI 49740-1219  
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St. Clair Center  
1013 S. Seventh Street  
St. Clair, MI 48079-5043  
(810) 329-7800  
Fax (810) 329-2927

David Overton, MD, letter supporting request for accommodations (4/12/2018)  
Personal Statement regarding need for accommodations (6/6/2018)  
NBME letter from Catherine Farmer, PsyD, regarding offered accommodations (9/11/2018)  
MCAT Score Report for exams taken (11/4/2011)  
Charles Livingston, MA, WAIS-IV score report (9/12/2014), report (9/22/2014), Addendum (9/12/2014)  
ACT Score Report (3/2007 & 10/2007)  
USMLE Step 1 Score Report (7/017)  
Review of report cards for grades K, 2, 3, 4, 5, 6  
Review of high school transcript  
Review of undergraduate college transcript  
Review of letters from Dr. Mary Alice Tanguay, Therapeutic Optometrist (1/27/2000 & 12/1997)

### **Reason for Referral**

Ms. Ramsay is currently on academic leave from her fourth year of medical school because she failed her initial United States Medical Licensing Exam (USMLE) Step 1, which is a requirement for continuing and completing her medical degree. She has formally been granted accommodations, such as extended time for tests and testing in a private room, during her undergraduate years at Ohio State University and at the Western Michigan University Homer Stryker, MD School of Medicine. Ms. Ramsay applied for the same accommodations from the National Board of Medical Examiners (NBME), which administers the USMLE, but was denied accommodations. She attempted the USMLE Step 1 without accommodations, but failed. She is appealing the NBME denial and sought this evaluation as part of her appeal.

### **History and Interview Information**

Ms. Ramsay is currently living with her fiancé with whom she has lived for the past two years. She described her health as fair. She has several health conditions which are being appropriately medically managed. She had a deep vein thrombosis (DVT) the full length of her leg in 2016 and was later diagnosed with a clotting disorder. The DVT damaged the circulation in her legs, and sitting or standing for long periods causes painful swelling in her legs. Her vision is normal and was screened in August 2014. No hearing problems were reported and her hearing was evaluated in 2015. Ms. Ramsay was born in Texas. Her family moved to Michigan when she was 10 years of age. Her father is 57 years old, employed in sales, with a bachelor's degree. Her mother is 68 years old and is a retired art educator with a bachelor's degree in art education and a master's degree in education. She has two adopted brothers, ages 24 and 20. There is no history of substance abuse or severe psychological problems. Ms. Ramsay has had frequent headaches since she was very young, which her mother described as occurring during and after school as early as kindergarten. Beginning in third grade, she started having daily migraine headaches with blind spots, nausea, and hypersensitivity to light, sound and temperature, which was attributable to the mental strain from reading and writing for extended periods of time. Subsequent treatment over that next year reduced the frequency of migraines, but she has continued to experience migraine symptoms throughout her academic career.

Ms. Ramsay's mother had no problems or complications during pregnancy and Ms. Ramsay had no birth complications when born. There were no problems during her infancy/toddler period. Ms. Ramsay is ambidextrous, but was originally left handed. Her kindergarten teacher made her use her right hand, which was common practice at that time. When home she would use her left hand, but gradually switched to primarily using her right hand for writing tasks. She does many activities with her left hand and frequently switches back and forth.

For leisure activities Ms. Ramsay socializes with friends and family, plays sports and works out. She enjoys camping, hiking, art, hunting, archery, soccer, running, volleyball, watching football, dance, yoga, and weight training.

Ms. Ramsay reported that she tries very hard to succeed at schoolwork. She generally likes herself, though she indicated she is anxious and worried about her future because of having to suspend medical school. She has difficulty falling asleep, but sleeps six to eight hours a night. Her appetite is normal. She has several close friends she can confide in. She is often restless or fidgety and restless. She typically avoids anything that involves waiting. She often makes careless mistakes. Ms. Ramsay often has difficulty getting organized and finishing what she starts. She often has difficulty concentrating on one thing for very long. She is often easily distracted; she tends to forget what she is supposed to do and often loses her personal belongings.

Ms. Ramsay stated that she has marked difficulty sustaining attention, especially for extended periods, is very easily distracted by sounds, movement, and flashes of light, as well as her own thoughts and sensations. These distractions make it difficult to complete tasks that require sustained mental effort, such as thinking, maintaining conversation, remembering obligations and assignments, getting organized, staying on track, and completing tasks and projects. For example, she reported that when voting in an election she has difficulty reading and comprehending proposals she is trying to vote on. She often forgets where she put things such as her wallet, keys, assignments, phone, and legal documents. She also indicated that she is impulsive, has difficulty waiting, including for her turn in conversations. She unintentionally interrupts others, or blurts out her thoughts before fully thinking them through or appropriately filtering them for the situation. It is very difficult for her to focus on one idea at a time and she jumps quickly from one thought to another. She frequently forgets things she needs to do, forgets instruction, forgets what someone just said to her, and loses her train of thought when talking.

During exams and when reading, she will get lost in unrelated thoughts and loses track of what the questions are asking. She often unintentionally completes only part of the question in an exam. Consequently, she tries to compensate by reading and rereading the question aloud and double checking her answer selections. She also is very restless when sitting is required and constantly needs to be moving around or doing something. When expected or required to sit for prolonged periods, she becomes very restless and fidgety, doodles on papers, picks at her hair or clothes, and messes with objects within reach, which can be disruptive to others around her and has caused others at school to complain. Not being able to sit still for extended periods interferes with her ability to study, work on assignments, maintain professional behavior at work, and watch television to relax at home. Consequently, she typically needs to take frequent breaks from these activities to walk around and do something else to help manage her restlessness. Having to perform tasks that require

sustained mental effort often results in migraine headaches and associated blind spots, which affect her ability to see and read. The headache itself, along with the associated nausea and hypersensitivity to light, sound, and temperature, exacerbates her difficulty sustaining attention and ability to read, think, process, and answer questions.

#### *School History*

Ms. Ramsay (Jessica) has a history of academic struggle that began from her first days in school and has consistently required accommodations such as extended time on tests and assignments, altered grading schemes, frequent breaks, and a private space for testing and completing classwork in order to compensate for distractibility, impaired attention and concentration, impaired reading comprehension, impaired reading speed, and hyperactivity.

Jessica's mother, Jerri Shold, recalled having difficulty learning to read when she was in kindergarten (in 1955) and early elementary school and was concerned that Jessica may have similar difficulties. The parenting books Ms. Shold read all recommended beginning sight words early, so Ms. Shold started working with Jessica during her preschool years up until it was time to start kindergarten. When Ms. Shold applied the sight word programs at home, Jessica could correctly identify letters if her mother pointed at specific letters within a sight word. She could repeat the word correctly when first read aloud by her mother, and could use the word correctly in a sentence. However, when later presented with the same sight words, Jessica could not recognize the sight words she had been previously exposed to no matter how many times her mother went through the words with her. Ms. Shold tried all the different methods suggested by these sight word programs, but the words didn't mean anything to Jessica. When Jessica was about four years old, the preschool she was enrolled in (Prince of Peace) did some developmental and IQ testing to assess whether she was ready to start kindergarten. The evaluation showed that she was intelligent and was mentally ready to start kindergarten, but noted that when shown simple images she had trouble copying them correctly. It was concluded that Jessica's fine motor skills were not at the level of a five year old. Ms. Shold and her preschool teachers thought her fine motor skills were advanced for her age. Based on the testing, Jessica was put into kindergarten for half the day, and then went back to preschool for the remainder of the day, five days a week. Her teachers reported that Jessica still was not really grasping the sight words at that point, though she was doing fine in everything else.

Ms. Shold recalled that when she had her own difficulty learning to read she was sent home with packets to help her work on phonics and reading. Ms. Shold believed that this extra help with phonics made a big difference for her, so she wanted Jessica to have the foundation of phonics so that she would be able to break words down and sound them out if she didn't recognize them. None of the public schools in her area used a phonetic reading program to teach reading. Consequently, Jessica's mother identified a private school that used a phonics-based reading program (Sunset Oaks Academy) and transferred Jessica there, where she was enrolled in fulltime Kindergarten. Ms. Shold believed the phonetic reading program was important for Jessica to progress and also thought the smaller class sizes would allow Jessica to receive more one-on-one reading, spelling and writing instruction than Jessica would receive in the public school system.

Jessica attended the Sunset Oaks Academy and received extensive individual instruction in reading, spelling and writing through the phonics-based program from Kindergarten through the second grade. Jessica received informal accommodations of a separate quiet space and extra time to complete tests and assignments. In third grade she transferred to the Carrollton-Farmers Branch Public School System when the family moved. Jessica attended the Carrollton-Farmers Branch Public Schools through the fifth grade. Jessica still struggled with reading, writing, and spelling when compared to her peers and her mother informed her teachers about her history and what prior teachers had done to help Jessica.

Jessica and her mother, Jerri Shold, also reported that beginning in her earliest school years and continuing through elementary school and beyond, Jessica had severe problems in the following areas: making many mistakes in her schoolwork, sustaining attention during tasks or activities, finishing schoolwork and tasks at home, organizing tasks, disliking or procrastinating on tasks that required sustained mental effort, losing things needed for task completion, being easily distractible, being forgetful in daily activities, fidgeting, not staying seated when expected, and not waiting or taking turns. Throughout elementary school, Jessica's teachers verbally commented to Ms. Shold that Jessica was very bright, but a slow reader who often forgot to turn in completed assignments.

It has always taken Jessica significantly more time and effort to study and complete assignments than other students. For example, she recalled that friends would become frustrated with her when she would not join them for recreational activities because she would typically be working on homework until bedtime (often past midnight), while her friends completed their homework in the early evening and were free for leisure activities. Ms. Shold confirmed that this was typical of Jessica's evenings from early elementary school through graduation from high school. Her first, second, third and fourth grade teachers noticed that Jessica had difficulty with reading, spelling and writing, and each teacher provided extra individual but informal remedial reading, spelling, and writing instruction during those grades.

Jessica's second grade teacher was concerned enough to recommend that her vision be tested. Jessica was referred to Dr. Mary Alice A. Tanguay, a therapeutic optometrist, who performed visual-perceptual skills testing and found significant deficits in Jessica's visual spatial relationships, visual discrimination, and visual memory. Jessica subsequently received visual perceptual skills training from Dr. Tanguay, though Jessica's school functioning did not improve. Ms. Shold, who has a master's degree in education, also worked nightly to remediate Jessica's reading, writing and spelling problems throughout elementary school. She regularly reviewed Jessica's work in middle and high school, as well as her essays throughout college and for medical school applications. Jessica's parents did not pursue an evaluation for her learning problems because her hard work in the evenings and the informal accommodations she received masked the degree of academic struggle she experienced.

Jessica managed to get good grades during her elementary, middle and high school years with the aid of these accommodations, which were provided on an informal basis. While Jessica's elementary, middle school and high school records do not reflect the struggle she reported, the early onset and chronic struggle that necessitated the accommodations, her teachers' verbal descriptions of Jessica's difficulty, and her mother's remedial efforts were corroborated by her mother.

Jessica graduated from high school in 2008 with a 3.75 grade point average. Because she did not have any type of formal diagnosis or accommodations, she did not know about the possibility of accommodations such as extended time and did not apply for or receive any type of accommodations when she took the ACT entrance exam for college.

During her freshman undergraduate year at Ohio State University, her compensatory strategies were overwhelmed by academic demands and her personal life. She experienced pronounced difficulty maintaining attention during tasks and activities, repeatedly misplaced things, lost track of completed assignments, made seemingly careless mistakes in her work, often misunderstood test questions and assignment directions and could not organize her tasks and activities. She spent increasingly more time on her schoolwork trying to compensate for these difficulties and neglected other important tasks, such as paying bills, cooking, cleaning, or engaging in leisure, recreational, social activities and sleep.

Jessica subsequently consulted her primary care physician, Dr. Allen Smiy, who diagnosed her with ADHD on March 24, 2009, and began pharmacological treatment. Jessica applied to the college's Office of Disability Services (ODS) and Dr. Smiy completed the Ohio State University ADD/ADHD Verification Form on August 13, 2010, which identified a DSM-IV diagnosis of ADHD, Inattentive Type and stated that Jessica often exhibited the DSM-IV inattention symptoms of having difficulty sustaining attention in tasks or other activities, having difficulty organizing tasks and activities, avoiding or disliking tasks that required sustained mental effort, being easily distracted by extraneous stimuli and being forgetful in daily activities. Jessica was approved by Ohio State University (OSU) to formally receive the accommodations of priority class scheduling, access to an assigned Office of Disabilities Services advisor, 50% additional testing time, a distraction reduced testing space, ear plugs for all quizzes or tests, supportive materials such as scrap paper for notetaking, colored pencils and highlighters to reword and draw diagrams on test questions for better understanding.

Jessica graduated from Ohio State University in 2012 with a 3.56 grade point average. With these formal accommodations, Jessica was better able to compensate for her inattention, distractibility, hyperactivity, and difficulties in reading and writing. However, there were still many tests that required a large amount of reading and/or writing that Jessica was unable to complete because there was still not adequate time for her to read all of the questions and/or write sufficient responses, though she understood the material being tested. In these instances, Jessica reached out to her professors about this continued struggle, and often her professors provided additional informal accommodations such as altered grading schemes or more time to complete unattempt portions, to allow Jessica to achieve a grade that better represented her competency.

Jessica did not find out that applying for accommodations for the MCAT was even a possibility until, near the end of her MCAT prep course through Princeton Review, one of the course instructors mentioned it while discussing Jessica's difficulty with reading. Jessica was advised not to apply or take the MCAT with accommodations unless she was unable to achieve an acceptable score after multiple attempts because her score report would show that she had received accommodations and that would hurt her chances of getting offered interviews. Jessica then made an appointment with her advisor at the OSU Office of Disability Services (ODS) to verify the possibility of receiving accommodations and the affect it would have on her application. Jessica's ODS advisor cautioned against taking the MCAT with accommodations for the same reason and also

explained that, while Jessica had adequate documentation from her initial diagnosis by Dr. Smiy to qualify for accommodations through OSU, the AAMC would likely require a full neuropsychology evaluation which would be expensive and was unlikely to be completed in time to apply for accommodations before her scheduled MCAT exam.

Because Jessica receive advice against receiving appropriate accommodation from multiple informed sources, she decided to try the MCAT without accommodations. When she took the exam, she relied on strategies suggested by her Princeton Review instructors in addition to her own established methods to compensate for her ADHD and difficulties with reading and writing. Like she had done for prior standardized tests, her Princeton Review instructors suggested that Jessica not read the passages until she had first answered all the questions she could without reading the passage. Only then with any remaining time, she could go back and try to answer the passage-dependent questions starting with the shortest passages. Finally, with the last minute, it was recommended that she randomly fill in answers to any questions she wasn't able to get to. Using this strategy, Jessica was able to obtain a good score in the 79<sup>th</sup> percentile (30M) of students who take the exam. This, however, was not the exceptional MCAT scores that would have been expected with her intelligence and understanding of the material. Jessica's performance on the MCAT component sections reflected her relative weakness specific to reading tasks with a Verbal Reasoning score at the 67<sup>th</sup> percentile, a Physical Sciences score at the 79<sup>th</sup> percentile and a Biological Sciences score at the 88<sup>th</sup> percentile.

Jessica applied to fourteen medical schools the first year after taking the MCAT and was only offered one interview, but was not accepted. The next year she again applied to twenty-five schools and received only two interviews. She was placed on a wait list for two schools, one of which, Western Michigan University, ultimately accepted her. Jessica believes that because she took the MCAT under standard time and with no accommodations for her ADHD, her modest MCAT score did not reflect how much she knew in the three component areas of Physical Sciences, Biological Sciences and Verbal Reasoning. If Jessica had been able to take the MCAT with appropriate accommodations, she likely would have achieved a much higher score that more accurately represented her intelligence, understanding of the material, and ability to apply the information.

Once accepted, Jessica requested accommodations from Western Michigan University Homer Stryker MD School of Medicine because of her ADHD and symptoms of dyslexia when she first began taking classes. She was referred to Charles Livingston, MA, for an evaluation to support her application for accommodations. Western Michigan University Homer Stryker MD School of Medicine approved her application and she was formally granted the accommodations of double exam time and a separate room to minimize distractions for all standardized NBME CBSE, Shelf exams and other exams written and administered by the school. Jessica applied for the same accommodations for the USMLE Step 1 exam, administered by the National Board of Medical Examiners (NBME) in 2016, but was denied accommodations. She attempted the USMLE without any accommodations and failed. Jessica is currently on academic leave from medical school because she failed her initial United States Medical Licensing Exam (USMLE) Step 1 exam, which is required to continue her fourth year rotations and complete her medical degree.

**MENTAL STATUS & OBSERVATIONS:** Jessica was neat in appearance and her demeanor was friendly and cooperative throughout the evaluation. She made good eye contact and her speech was at a normal rate, expressed in a normal manner and readily understood. Jessica did not have difficulty understanding directions and in the infrequent instances in which she appeared uncertain, she requested directions to be repeated or clarified. She persisted answering questions and completing tasks for an appropriate amount of time. Her answers to this examiner's questions were clear with appropriate, unguarded elaboration. Her mood and attitude were normal and her affect was appropriate. Her thought process and content were normal. Jessica was oriented to person, place, time and date. Jessica made a consistently high level of exertion on all tasks and the test results and self-report are an accurate measure of her functioning. Jessica did not take any of her ADHD medication on the day of the testing so that the results would more accurately reflect her functioning without the mitigating effects of the medications.

## **ASSESSMENT RESULTS**

### **Symptom Validity**

#### *Test of Memory Malingering (TOMM)*

The TOMM was administered midway through the exam. Jessica was told that the TOMM measured important memory skills needed for efficient reading. Jessica's performance on the TOMM resulted in 50 of 50 items correct on Trial 2 and after a delay of 15 minutes she correctly answered 50 of the 50 items on the Retention Trial. This pattern of TOMM scores does not reflect suboptimal effort. Her overall pattern of test scores and behavioral performance reflected strong effort on all tests administered to her.

### **Intellectual Functioning**

The following interpretation is based on the Wechsler Adult Intelligence Scale—Fourth Edition (WAIS-IV) scores obtained by Alan Lewandowski, PhD, as part of a neuropsychological evaluation conducted on November 9, 2017. The Wechsler Adult Intelligence Scale—Fourth Edition (WAIS-IV) provides a general overview of Jessica's overall thinking and reasoning skills, encompassing four broad domains: Verbal, Perceptual, Working Memory, and Processing Speed. The Verbal Comprehension Index (VCI) provides a measure of how well she did on tasks that required her to listen to questions and give oral responses to them. The Perceptual Reasoning Index (PRI) indicates how well she did on tasks that required her to examine and think about designs, pictures, and puzzles, and to solve problems without using words. Her ability to attend to information, to hold and process it in memory, and to give a response is measured by the Working Memory Index (WMI). The last index, Processing Speed Index (PSI), provides information regarding her ability to process simple visual information quickly and efficiently. When the Index scores are markedly different from each other, the Full-Scale IQ score is not the best summary of an individual's performance. Alternate scores or the separate index scores should be used.

The scores show how well Jessica performed compared to a group of individuals of the same age from across the United States. An individual may have WAIS-IV scores that fall within a wide range from Extremely Low to



Very Superior. Most individuals, however, perform within the Average range. A percentile rank is also reported. This shows where the individual's scores rank relative to the national comparison group. For example, if Jessica's percentile rank (PR) was 45, it would mean that she scored higher than approximately 45 out of 100 individuals her age.

#### *General Intellectual Ability*

The Full-Scale IQ (FSIQ) composite score is derived from ten subtest scores and is usually considered the most representative estimate of global intellectual functioning. Jessica's FSIQ score is within the high average range and exceeds those of approximately 87% of individuals her age (FSIQ=117; 95% confidence interval=113-121). She performed slightly better on nonverbal than on verbal reasoning tasks, but there is no meaningful difference between Jessica's ability to reason with and without the use of words. However, her Processing Speed Index score of 79 is significantly and uncommonly below the Verbal Comprehension Index and the Perceptual Reasoning Index scores. Consequently, her FSIQ score does not accurately reflect her optimum intellectual ability. Jessica's optimum intellectual capacity is most accurately reflected in the General Ability Index (GAI), which is calculated from the VCI and PRI subtests and does not include the attention-related Working Memory Index and Processing Speed Index subtest scores. Jessica's GAI score is significantly higher than her FSIQ score by a very uncommon margin estimated to occur in only 0.4% of the general population. Her GAI score of 132 is in the very superior range and is higher than 98% of other adults her age.

#### *Verbal Comprehension*

Jessica's verbal reasoning abilities as measured by the Verbal Comprehension Index (VCI) are in the superior range and above those of approximately 95% of her peers (VCI=125; 95% confidence interval=118-130). The VCI is designed to measure verbal reasoning and concept formation. Jessica's performance on the verbal subtests contributing to the VCI presents a diverse set of verbal abilities; she performed much better on some verbal tasks than others. The degree of variability is unusual and may be noticeable to those who know her well. Examination of Jessica's performance on individual subtests provides additional information regarding her specific verbal abilities.

Jessica achieved her best performance among the verbal reasoning tasks on the Information subtest. Her strong performance on the Information subtest was much better than that of most of her peers. The Information subtest required Jessica to respond orally to questions about common events, objects, places, and people. The subtest is primarily a measure of her fund of general knowledge. Performance on this subtest also may be influenced by cultural experience and quality of education as well as her ability to retrieve information from long-term memory (Information scaled score=16).

#### *Perceptual Reasoning*

Jessica's nonverbal reasoning abilities as measured by the Perceptual Reasoning Index (PRI) are in the very superior range and above those of approximately 98% of her peers (PRI=131; 95% confidence interval=123-136). The PRI is designed to measure fluid reasoning in the perceptual domain with tasks that assess nonverbal concept formation, visual perception and organization, visual-motor coordination, learning, and the ability to separate figure and ground in visual stimuli. Jessica performed comparably on the perceptual reasoning

subtests contributing to the PRI, suggesting that her visual-spatial reasoning and perceptual-organizational skills are similarly developed.

### *Working Memory*

Jessica's ability to sustain attention, concentrate, and exert mental control is in the high average range. She performed better than approximately 77% of her peers in this area (Working Memory Index [WMI]=111; 95% confidence interval=104-117). Jessica's abilities to sustain attention, concentrate, and exert mental control are a weakness relative to her nonverbal reasoning abilities. At her level of ability, a relative weakness in mental control likely makes the processing of complex information more time consuming for Jessica, draining her mental energies more quickly as compared to others.

### *Processing Speed*

Processing speed is an indication of the rapidity with which Jessica can mentally process simple or routine information without making errors. Jessica's ability in processing simple or routine visual material without making errors is in the borderline range when compared to her peers. She performed better than approximately 8% of her peers on the processing speed tasks (Processing Speed Index [PSI]=79; 95% confidence interval=73-89). Processing visual material quickly is an ability that Jessica performs poorly when compared to her verbal and nonverbal reasoning ability.

### Composite Score Summary

| Scale                | Sum of Scaled Scores | Composite Score | Percentile Rank | 95% Confidence Interval | Qualitative Description |
|----------------------|----------------------|-----------------|-----------------|-------------------------|-------------------------|
| Verbal Comprehension | 43                   | VCI 125         | 95              | 118-130                 | Superior                |
| Perceptual Reasoning | 46                   | PRI 131         | 98              | 123-136                 | Very Superior           |
| Working Memory       | 24                   | WMI 111         | 77              | 104-117                 | High Average            |
| Processing Speed     | 12                   | PSI 79          | 8               | 73-89                   | Borderline              |
| Full Scale           | 125                  | FSIQ 117        | 87              | 113-121                 | High Average            |
| General Ability      | 89                   | GAI 132         | 98              | 126-136                 | Very Superior           |

### Index Level Discrepancy Comparisons

| Comparison | Score 1 | Score 2 | Difference | Critical Value .05 | Significant Difference Y / N | Base Rate Ability Level |
|------------|---------|---------|------------|--------------------|------------------------------|-------------------------|
| VCI - PRI  | 125     | 131     | -6         | 8.32               | N                            | 34.3                    |
| VCI - WMI  | 125     | 111     | 14         | 8.81               | Y                            | 18.4                    |
| VCI - PSI  | 125     | 79      | 46         | 10.99              | Y                            | 2.7                     |
| PRI - WMI  | 131     | 111     | 20         | 8.81               | Y                            | 9                       |
| PRI - PSI  | 131     | 79      | 52         | 10.99              | Y                            | 1.3                     |
| WMI - PSI  | 111     | 79      | 32         | 11.38              | Y                            | 3.7                     |
| FSIQ - GAI | 117     | 132     | -15        | 3.51               | Y                            | 0.4                     |

Base rate by ability level.

Statistical significance (critical value) at the .05 level.

#### Verbal Comprehension Subtests Summary

| Subtest         | Scaled Score | Percentile Rank |
|-----------------|--------------|-----------------|
| Similarities    | 13           | 84              |
| Vocabulary      | 14           | 91              |
| Information     | 16           | 98              |
| (Comprehension) | 15           | 95              |

#### Perceptual Reasoning Subtests Summary

| Subtest              | Scaled Score | Percentile Rank |
|----------------------|--------------|-----------------|
| Block Design         | 15           | 95              |
| Matrix Reasoning     | 16           | 98              |
| Visual Puzzles       | 15           | 95              |
| (Figure Weights)     | 15           | 95              |
| (Picture Completion) | 14           | 91              |

#### Working Memory Subtests Summary

| Subtest    | Scaled Score | Percentile Rank |
|------------|--------------|-----------------|
| Digit Span | 12           | 75              |
| Arithmetic | 12           | 75              |

#### Processing Speed Subtests Summary

| Subtest        | Scaled Score | Percentile Rank |
|----------------|--------------|-----------------|
| Symbol Search  | 7            | 16              |
| Coding         | 5            | 5               |
| (Cancellation) | 9            | 37              |

## Sustained Attention

The IVA+Plus CPT (Integrated Visual & Auditory Continuous Performance Test) is a test of attention that measures responses to 500 intermixed auditory and visual stimuli spaced 1.5 seconds apart. The task is to click the mouse when the stimulus is an auditory or visual "1" and to refrain from clicking when the stimulus is an auditory or visual "2." A correct response is defined as exactly one click to a target stimulus. The individual taking the test must be able to discriminate between 1s and 2s, switch between sensory modalities, and maintain attention for about thirteen minutes. The targets ("1") occur frequently during some sections of the test and rarely during other sections, thus testing attention under both high and low demand conditions. The high demand condition is defined as a "block" of 50 trials when the 1s are frequent. The first two target presentations are excluded from the measurement of performance under high demand conditions and are categorized as being part of the previous low demand conditions block. The reason that these first two

targets are categorized in this way is that they are still pulling for errors of inattention as the test-taker has not yet made the transition to the mode of rapid clicking that is characteristic of the high demand block.

The quotient scores for all of the IVA+Plus scales are reported as standard scores. Standard scores have a mean of 100 and a standard deviation of 15. The Wechsler Intelligence tests, which are commonly used in schools to assess Full Scale, Verbal and Performance IQ, also use standard scores (i.e., Mean=100, SD=15).

In addition to reporting standard scores for the IVA+Plus scales, the narrative report below also provides percentile rank. A person with a standard score of 100 has a percentile rank of 50, meaning that about half the people taking the test scored higher on that scale, and about half scored lower. In this narrative report, percentile rank is given in the format "(PR=50)" immediately following each standard score that is reported. For example, "John's Auditory Vigilance Score of 80 (PR=9) fell in the mildly impaired range."

Jessica was administered the IVA+Plus twice, approximately one hour apart, as a check on the consistency of her responses.

### 1<sup>st</sup> Administration

#### *VALIDITY OF TEST RESULTS*

Jessica demonstrated sufficient understanding of the task for the test results to be considered valid in both the auditory and visual modalities for the Global, Primary and Attribute scales. The validity of the IVA+Plus CPT is assessed by determining whether an individual's responses are characteristic of random responding. The test is considered valid only when the individual's decision to click to targets and inhibit clicking to non-targets is based on self-directed responses in accordance with the test rules. Statistically, the test results for a specific sensory modality are considered invalid when the probability of the individual's response pattern being self-directed in accordance with the test rules is less than 1 in 1000.

#### *IVA+Plus DIAGNOSTIC INTERPRETIVE GUIDELINES*

A working diagnosis of Attention-Deficit/Hyperactivity Disorder, combined presentation was supported by the IVA+Plus test data. Jessica's global Response Control quotient scale score indicated an extreme impairment. In addition, her global Attention quotient scale score fell in the extremely impaired range. These impairments on the IVA+Plus test indicate that her pattern of responding is likely to impair her functioning and performance in the home or work environment.

#### *SUMMARY OF TEST RESULTS FOR THE IVA+Plus GLOBAL SCALES*

The Full-Scale Response Control Quotient is a global measure of the overall ability for Jessica to regulate her responses and respond appropriately. Factors that load on this scale include the ability to inhibit responses to non-targets, the consistency of recognition reaction times and the person's ability to maintain her mental processing speed during the IVA+Plus test. Jessica's overall global quotient scale score for the Full-Scale Response Control scale was 44 (PR=1). This score fell in the extremely impaired range. Her Auditory Response Control quotient scale score was 38 (PR=1). This global scale score fell in the extremely impaired range.

Jessica's Visual Response Control quotient scale score was 65 (PR=1). This global scale score fell in the severely impaired range.

The Full-Scale Attention Quotient provides a measure of an individual's overall ability to make accurate responses, stay focused and sustain her attention. This global scale's factors include the ability to be attentive and accurately respond under low demand conditions, remain focused and stay reliably "on task," and, at the same time, respond quickly when appropriate. Jessica's overall quotient score on the Full-Scale Attention scale was 50 (PR=1). This global scale score fell in the extremely impaired range. Her Auditory Attention quotient scale score was 65 (PR=1) and this global scale score fell in the severely impaired range. Jessica's Visual Attention quotient scale score was 44 (PR=1). This global scale score was classified as falling in the extremely impaired range.

The Combined Sustained Attention quotient scale score provides a global measure of a person's ability to accurately and quickly respond in a reliable manner to stimuli under low demand conditions. In addition, it includes the ability to sustain attention and be flexible when things change under high demand conditions. Jessica's global quotient score on the Combined Sustained Attention scale was 58 (PR=1). This score fell in the extremely impaired range. Her global Auditory Sustained Attention quotient scale score was 65 (PR=1) and it fell in the severely impaired range. Jessica's global Visual Sustained Attention quotient scale score was 59 (PR=1). This score was found to fall in the extremely impaired range.

## 2<sup>nd</sup> Administration

### *VALIDITY OF TEST RESULTS*

Jessica demonstrated sufficient understanding of the task for the test results to be considered valid in both the auditory and visual modalities for the Global, Primary and Attribute scales.

### *IVA+Plus DIAGNOSTIC INTERPRETIVE GUIDELINES*

A working diagnosis of Attention-Deficit/Hyperactivity Disorder, combined presentation was supported by the IVA+Plus test data. Jessica's global Response Control quotient scale score indicated an extreme impairment. In addition, her global Attention quotient scale score fell in the extremely impaired range. These impairments on the IVA+Plus test indicate that her pattern of responding is likely to impair her functioning and performance in the home or work environment.

### *SUMMARY OF TEST RESULTS FOR THE IVA+Plus GLOBAL SCALES*

The Full-Scale Response Control Quotient is a global measure of the overall ability for this individual to regulate her responses and respond appropriately. Factors that load on this scale include the ability to inhibit responses to non-targets, the consistency of recognition reaction times and the person's ability to maintain her mental processing speed during the IVA+Plus test. Jessica's overall global quotient scale score for the Full-Scale Response Control scale was 37 (PR=1). This score fell in the extremely impaired range. Her Auditory Response Control quotient scale score was 48 (PR=1). This global scale score fell in the extremely impaired range. Jessica's Visual Response Control quotient scale score was 44 (PR=1). This global scale score fell in the severely impaired range.

The Full-Scale Attention Quotient provides a measure of an individual's overall ability to make accurate responses, stay focused and sustain attention. This global scale's factors include the ability to be attentive and accurately respond under low demand conditions, remain focused and stay reliably "on task," and, at the same time, respond quickly when appropriate. Jessica's overall quotient score on the Full-Scale Attention scale was 58 (PR=1). This global scale score fell in the extremely impaired range. Her Auditory Attention quotient scale score was 72 (PR=3) and this global scale score fell in the severely impaired range. Jessica's Visual Attention quotient scale score was 50 (PR=1). This global scale score was classified as falling in the extremely impaired range.

The Combined Sustained Attention quotient scale score provides a global measure of a person's ability to accurately and quickly respond in a reliable manner to stimuli under low demand conditions. In addition, it includes the ability to sustain attention and be flexible when things change under high demand conditions. Jessica's global quotient score on the Combined Sustained Attention scale was 58 (PR=1). This score fell in the extremely impaired range. Her global Auditory Sustained Attention quotient scale score was 73 (PR=4) and it fell in the severely impaired range. Jessica's global Visual Sustained Attention quotient scale score was 51 (PR=1). This score was found to fall in the extremely impaired range.

### **Behavioral-Psychological Functioning**

During the diagnostic interview, Jessica indicated that she has exhibited nine of the nine criteria associated with attention-deficit hyperactivity disorder, predominantly inattentive presentation, and eight of the nine criteria of ADHD, predominantly hyperactive-impulsive presentation. Jessica endorsed the following symptoms:

- Fails to pay close attention to details or makes careless mistakes
- Has difficulty sustaining attention
- Often does not listen when spoken to directly
- Has trouble following through on instructions and often fails to finish school work, chores or work duties
- Has difficulty organizing tasks and activities
- Avoids tasks that require sustained mental effort
- Loses things needed to finish tasks
- Is easily distracted
- Is forgetful in daily activities
- Often fidgets or squirms in seat
- Has difficulty remaining seated when expected
- Feels very restless most of the time
- Talks excessively
- Has difficulty waiting for her turn
- Interrupts and intrudes on others

Jessica's mother endorsed eight of the inattentive symptoms and six of the hyperactive/impulsive symptoms, which corroborated many of the difficulties Jessica described. The ratings provided by Jessica's fiancé also

confirms that these symptoms are frequently in evidence. Her fiancé endorsed seven of the inattentive symptoms and five of the hyperactive-impulsive symptoms.

*Symptom Checklist-90-Revised (SCL-90-R)*

Overall, Jessica’s SCL-90-R symptom profile is not of a nature or magnitude to be considered in the clinical range. General symptomatic distress levels are average to low-average for her, suggesting good psychological integration, and little global psychological distress. Jessica’s report reflects little evidence of psychological distress associated with somatic symptoms, or psychosomatic problems. Levels of obsessive-compulsive symptoms are clearly in the clinical range. However, the symptoms she rated as involving significant distress are all behaviors she described as either difficulty concentrating or behaviors used to compensate for her ADHD symptoms. The other behaviors from this scale that directly related to obsessive-compulsive symptoms were rated as involving no distress. Depressive symptoms are somewhat above average in this individual's record, but do not appear clinically noteworthy. There are several isolated signs or symptoms of anxiety in the respondent's test protocol. However, they do not appear to represent clinically significant experiences. There is little or no evidence of paranoid thinking in this respondent's record.

|                     | SOM  | O-C  | I-S  | DEP  | ANX  | HOS  | PHOB | PAR  | PSY  | GSI  | PSDI | PST |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Nonpatient T Score: | 41   | 66   | 50   | 56   | 52   | 40   | 44   | 41   | 44   | 55   | 66   | 49  |
| Raw Score:          | 0.08 | 1.50 | 0.22 | 0.54 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 2.13 | 16  |
| Outpatient T Score: | 34   | 51   | 35   | 36   | 36   | 32   | 38   | 33   | 30   | 35   | 48   | 32  |
| Inpatient T Score:  | 35   | 51   | 37   | 37   | 38   | 36   | 37   | 33   | 31   | 37   | 48   | 34  |

*Primary Symptom Dimensions*

*SOM Somatization*

*O-C Obsessive-Compulsive*

*I-S Interpersonal Sensitivity*

*DEP Depression*

*ANX Anxiety*

*HOS Hostility*

*PHOB Phobic Anxiety*

*PAR Paranoid Ideation*

*PSY Psychoticism*

*General Indices*

*GSI Global Severity Index*

*PSDI Positive Symptom Distress Index*

*PST Positive Symptom Total*

## Academic Skills

The Wechsler Individual Achievement Test--Third Edition (WIAT-III) is an individually administered instrument designed to measure academic achievement skills in individuals from age 4 through 50. Descriptive statements are provided, ranging from Far Below Average to Far Above Average, based on the standard score. The scores and statements below are primarily based on age-based norms. A percentile rank is also reported in the table of scores, which shows where the clients score rank compared to a group of clients of the same age from across the United States. For example, if the percentile rank was 45, it would mean that the individual scored higher than approximately 45% of individuals her age.

The Total Reading Composite (TRC) is an overall measure of basic reading, fluency and reading comprehension. It is derived from the Word Reading, Pseudoword Decoding, Reading Comprehension and Oral Reading Fluency subtests. Jessica's Total Reading Composite score of 85 is at the bottom of the low average range and is higher than 16% of individuals her age.

The Basic Reading Composite (BRC) is a measure of applying phonemic knowledge and single word decoding. It is derived from the Word Reading and Pseudoword Decoding subtests. Jessica's Basic Reading Composite score of 96 is average and is higher than 39% of other individuals her age. The *Word Reading* subtest measures speed and accuracy of single word reading. The individual is asked to read aloud from a list of words which yields a score for accuracy and a score for speed. Jessica's Word Reading score of 100 is average and is higher than 50% of other individuals her age. The *Pseudoword Decoding* subtest measures speed and accuracy in applying phonemic knowledge to decode pseudowords. Jessica's Pseudoword Decoding score of 95 is average, which is the percentile rank of 37. The supplemental scores for speed of performing subtests were also calculated. The Word Reading Speed score is the same as or higher than the scores obtained by only 2% of individuals in the normative sample. Ninety-eight percent of students in the normative sample scored higher than Jessica in the Word Reading Speed score. The Pseudoword Decoding Speed score is the same as or higher than the scores obtained by only 5% of students in the normative sample; 95% of individuals in the normative sample scored higher than her Pseudoword Decoding Speed score.

Jessica's Reading Comprehension and Fluency Composite score of 74 is in the well below average range and is higher than only 4% of other individuals her age. The *Reading Comprehension* subtest is untimed and measures literal and influential reading comprehension skills using paragraph passages in which she was verbally asked open-ended questions by the examiner and was allowed to verbally give her answers. The examiner was allowed and asked for elaboration or clarification of her answers as needed. Jessica's Reading Comprehension score of 94 is in the average and is higher than 34% of other individuals her age. The *Oral Reading Fluency* subtest measures oral reading fluency of narrative passages and yields separate scores for overall oral reading accuracy and component scores for oral reading rate and oral reading fluency. Her overall Oral Reading Fluency score of 67 is far below average and is higher than 1% of other individuals her age. Her Oral Reading Rate score of 65 is far below average and is higher than 1% of other individuals her age. Her Oral Reading Accuracy score of 102 is average and is higher than 55% of other individuals her age.



The Written Expression Composite (WEC) is a measure of overall writing skills. It is derived from the Spelling, Sentence Composition, and Essay Composition subtests. The Spelling subtest measures written spelling of single words from dictation. The Sentence Composition subtest includes sentence combining and sentence building components, which measure sentence formulation skills including grammar, syntax, semantics and mechanics. Jessica's Written Expression Composite score of 100 is average and is higher than 50% of other individuals her age. Her Spelling score of 108 is average and is higher than 70% of other individuals her age. Jessica's Sentence Composition score of 104 is average and is higher than 61% of other individuals her age.

The Essay Composition subtest measures spontaneous written expression, which involves productivity, theme development, text organization, grammar and mechanics. The individual listens to instructions about general content the essay is to contain and then must plan, write and finalize an essay within a ten-minute time limit. The Essay Composition required Jessica to write an essay about her favorite game and include at least three reasons for liking it. The Essay Composition score is significantly influenced by the number of words produced, regardless of spelling, though theme development and organization contribute to the score. A separate supplemental component, Theme Development and Text Organization, reflects theme development and organization. Another supplemental subtest, Grammar and Mechanics, reflects grammar, punctuation, spelling and capitalization. Jessica's Essay Composition score of 91 is average and is higher than 27% of other individuals her age. Her Word Count score of 92 is average and higher than 30% of other individuals her age. Jessica's Theme & Text Organization score of 94 is average and is higher than 34% of other individuals her age. Her Grammar & Mechanics score of 91 is average and higher than 27% of other individuals her age.

The Mathematics Composite (MC) is an overall measure of ability to calculate a variety of different math procedures and apply math procedures in tasks that require math reasoning. It is derived from the Numerical Operations and the Math Problem Solving subtests. The Numerical Operations subtest measures math skills under untimed conditions. The Math Problem Solving subtest measures mathematics reasoning in solving math problems that are read to the individual. Jessica's Mathematics Composite score of 133 is far above average and higher than 99% of other individuals her age. Jessica's Numerical Operations score of 125 is well above average and is higher than 95% of other individuals her age. Her Math Problem Solving score of 136 is far above average and is higher than 99% of other individuals her age.

**WIAT-III****Age Based Scores: age at testing 28 years, 0 months****Composite Score Summary**

| <b>Composite</b>                  | <b>Standard Score</b> | <b>90% Confidence Interval</b> | <b>Percentile Rank</b> | <b>Qualitative Description</b> |
|-----------------------------------|-----------------------|--------------------------------|------------------------|--------------------------------|
| Total Reading                     | 85                    | 81-89                          | 16                     | Low Average                    |
| Basic Reading                     | 96                    | 92-100                         | 39                     | Average                        |
| Reading Comprehension and Fluency | 74                    | 67-81                          | 4                      | Well Below Average             |
| Written Expression                | 100                   | 94-106                         | 50                     | Average                        |
| Mathematics                       | 133                   | 129-137                        | 99                     | Far Above Average              |

**Subtest Score Summary**

| <b>Composite</b>      | <b>Standard Score</b> | <b>90% Confidence Interval</b> | <b>Percentile Rank</b> | <b>Qualitative Description</b> |
|-----------------------|-----------------------|--------------------------------|------------------------|--------------------------------|
| Reading Comprehension | 94                    | 84-104                         | 34                     | Average                        |
| Math Problem Solving  | 136                   | 130-142                        | 99                     | Far Above Average              |
| Sentence Composition  | 104                   | 96-112                         | 61                     | Average                        |
| Word Reading          | 100                   | 94-106                         | 50                     | Average                        |
| Essay Composition     | 91                    | 82-100                         | 27                     | Average                        |
| Pseudoword Decoding   | 95                    | 89-101                         | 37                     | Average                        |
| Numerical Operations  | 125                   | 120-130                        | 95                     | Well Above Average             |
| Oral Reading Fluency  | 67                    | 61-73                          | 1                      | Far Below Average              |
| Spelling              | 108                   | 103-113                        | 70                     | Average                        |

**Cumulative Percentages**

|                                  |   |
|----------------------------------|---|
| <b>Word Reading Speed</b>        | The score is the same as or higher than the scores obtained by 2% of students in the normative sample; 98% of students in the normative sample scored higher than this score. |
| <b>Pseudoword Decoding Speed</b> | The score is the same as or higher than the scores obtained by 5% of students in the normative sample; 95% of students in the normative sample scored higher than this score. |

**Subtest Component Score Summary**

| Subtest Component           | Standard Score | Percentile Rank | Qualitative Description |
|-----------------------------|----------------|-----------------|-------------------------|
| <b>Oral Reading Fluency</b> |                |                 |                         |
| Oral Reading Accuracy       | 102            | 55              | Average                 |
| Oral Reading Rate           | 65             | 1               | Far Below Average       |
| <b>Essay Composition</b>    |                |                 |                         |
| Grammar and Mechanics       | 91             | 27              | Average                 |

**Subtest Component Score Summary**

| Subtest Component                       | Standard Score | Percentile Rank | Qualitative Description |
|---|----------------|-----------------|-------------------------|
| <b>Sentence Composition</b>             |                |                 |                         |
| Sentence Combining                      | 105            | 63              | Average                 |
| Sentence Building                       | 104            | 61              | Average                 |
| <b>Essay Composition</b>                |                |                 |                         |
| Word Count                              | 92             | 30              | Average                 |
| Theme Development and Text Organization | 94             | 34              | Average                 |

**Differences Between Composite Standard Scores**

| Comparison   | Difference | Critical Value (Significance Level .05) | Significant Difference Y/N | Base Rate |
|--|------------|---|----------------------------|-----------|
| Total Reading vs. Basic Reading                          | -11        | 5.88                                    | Y                          | <=5%      |
| Total Reading vs. Reading Comprehension and Fluency      | 11         | 7.93                                    | Y                          | <=10%     |
| Total Reading vs. Written Expression                     | -15        | 6.83                                    | Y                          | >15%      |
| Total Reading vs. Mathematics                            | -48        | 5.70                                    | Y                          | <=1%      |
| Basic Reading vs. Reading Comprehension and Fluency      | 22         | 8.06                                    | Y                          | <=10%     |
| Basic Reading vs. Written Expression                     | -4         | 6.98                                    | N                          | >15%      |
| Basic Reading vs. Mathematics                            | -37        | 5.88                                    | Y                          | <=1%      |
| Reading Comprehension and Fluency vs. Written Expression | -26        | 8.77                                    | Y                          | <=5%      |
| Reading Comprehension and Fluency vs. Mathematics        | -59        | 7.93                                    | Y                          | <=1%      |
| Written Expression vs. Mathematics                       | -33        | 6.83                                    | Y                          | <=1%      |

**Note.** A negative difference indicates that the second composite has a higher score than the first composite listed in the comparison.

**ABILITY-ACHIEVEMENT DISCREPANCY ANALYSIS**

Ability Score: WAIS-IV FSIQ: 117

**Predicted Difference Method**

|                                      | Predicted<br>WIAT-III<br>Score | Actual<br>WIAT-III<br>Score | Difference | Critical<br>Value<br>.05 | Significant<br>Difference<br>Y/N | Base<br>Rate |
|--------------------------------------|--------------------------------|-----------------------------|------------|--------------------------|----------------------------------|--------------|
| <b>WIAT-III Composite</b>            |                                |                             |            |                          |                                  |              |
| Total Reading                        | 112                            | 85                          | 27         | 5.89                     | Y                                | <=1%         |
| Basic Reading                        | 110                            | 96                          | 14         | 4.83                     | Y                                | <=15%        |
| Reading Comprehension and<br>Fluency | 112                            | 74                          | 38         | 9.26                     | Y                                | <=1%         |
| Written Expression                   | 111                            | 100                         | 11         | 7.12                     | Y                                | >15%         |
| Mathematics                          | 112                            | 133                         | -21        | 5.87                     | Y*                               | N/A          |

**Note.** Base rates and standard deviation discrepancies are not reported when the actual achievement score equals or exceeds the predicted achievement score.

\*Indicates that the actual achievement score exceeds the predicted achievement score.

**ABILITY-ACHIEVEMENT DISCREPANCY ANALYSIS**

Ability Score: WAIS-IV GAI: 132

**Predicted Difference Method**

|                                      | Predicted<br>WIAT-III<br>Score | Actual<br>WIAT-III<br>Score | Difference | Critical<br>Value<br>.05 | Significant<br>Difference<br>Y/N | Base<br>Rate |
|--------------------------------------|--------------------------------|-----------------------------|------------|--------------------------|----------------------------------|--------------|
| <b>WIAT-III Composite</b>            |                                |                             |            |                          |                                  |              |
| Total Reading                        | 121                            | 85                          | 36         | 6.10                     | Y                                | <=1%         |
| Basic Reading                        | 118                            | 96                          | 22         | 5.01                     | Y                                | <=5%         |
| Reading Comprehension and<br>Fluency | 120                            | 74                          | 46         | 9.40                     | Y                                | <=1%         |
| Written Expression                   | 119                            | 100                         | 19         | 7.25                     | Y                                | <=10%        |
| Mathematics                          | 120                            | 133                         | -13        | 6.05                     | Y*                               | N/A          |

**Note.** Base rates and standard deviation discrepancies are not reported when the actual achievement score equals or exceeds the predicted achievement score.

\*Indicates that the actual achievement score exceeds the predicted achievement score.

Woodcock/Johnson IV (WJ-4) Tests of Achievement

The Woodcock/Johnson IV (WJ-4) Tests of Achievement are untimed, with the exception of the fluency tests, and reflect a person's ability to perform tasks when they are able to use any strategies they have developed to compensate for any weaknesses they may have in information processing. Descriptive statements are provided, ranging from far below average to very superior, based on the standard score. Jessica was compared to other adults her age in the general population.

The Reading Rate Cluster provides a measure of automaticity when reading single words and single sentences. It is derived from the Sentence Reading Fluency and Word Reading Fluency subtests. The Word Reading Fluency subtest allows three minutes for the examinee to read rows of four words and mark two words in each row that are either synonyms, antonyms or members of the same category. The Sentence Reading Fluency subtest allows three minutes for the examinee to read sentences and mark them as true or false. Jessica's Reading Rate Cluster score of 66 is in the Far Below Average range, which is higher than 1% of other individuals her age. Her Word Reading Fluency score of 58 is in the Far Below Average range, which is higher than 0.2% of other individuals her age. Her Sentence Reading Fluency score of 78 is in the Well Below Average range, which is higher than 7% of other individuals her age.

**TABLE OF SCORES**

*Woodcock-Johnson IV Tests of Achievement Form B and Extended (Norms based on age 28-1)*

| <b>CLUSTER/Test</b>      | <b>GE</b> | <b>RPI</b> | <b>Proficiency</b> | <b>SS (95% Band)</b> | <b>SS Classification</b> | <b>PR</b> |
|--------------------------|-----------|------------|--------------------|----------------------|--------------------------|-----------|
| READING RATE             | 3.9       | 1/90       | Extremely Limited  | 66 (57-75)           | Far Below Average        | 1         |
| Sentence Reading Fluency | 5.2       | 5/90       | Very Limited       | 78 (67-88)           | Well Below Average       | 7         |
| Word Reading Fluency     | 3.0       | 0/90       | Extremely Limited  | 58 (45-71)           | Far Below Average        | 0.2       |

GRAY-ORAL READING TESTS-FIFTH EDITION

The Gray-Oral Reading Tests-Fifth Edition (GORT-5) is a comprehensive measure of reading fluency with separate measures for speed, accuracy, overall fluency of combined speed and accuracy, and comprehension. Jessica's performance was compared to a group of individuals aged 19 through 23 years, which is the oldest group available for comparison. The GORT-5 was administered because it is the most comprehensive and robust measure available that reflects functioning when oral reading fluency and reading comprehension are simultaneously required. The GORT-5 passages reflect a broader range of complex reading than other measures of oral reading fluency such as the WIAT-III Oral Reading Fluency subtest.

The GORT-5 provides separate measurements of speed, accuracy, comprehension, and an overall measure reflecting the three components combined. The oldest normative age group available for comparison is a group of 19-year-old to 23 year-11-month-old adults. The GORT-5 scores of Rate, Accuracy, Fluency and Comprehension were demonstrated to have a strong correlation with age in the normative sample until age 13, with the progression of raw score gains getting smaller with each year of age until plateauing in the ages of the oldest normative age group.

Jessica's Rate score of 3 is far below average and is higher than 1% of other individuals in the comparison group. The Accuracy score reflects the number of decoding errors, omitted words, inserted words and repetitions. Her Accuracy score of 5 is well below average and is higher than 5% of other individuals in the

comparison group. The Fluency measure is derived from combining the Rate and Accuracy scores and is a measure of overall oral reading fluency. Jessica's Fluency score of 4 is well below average and is higher than 2% of other individuals in the comparison group. She was able to correctly read most of the words, but her reading was slow. Jessica read in short two-to-four words phrases and her oral reading was very halting with many repetition of words and self-corrections. The Comprehension measure is derived from open-ended questions about the content of each passage. Jessica's Comprehension score of 3 is extremely below average and is higher than 1% of other individuals in the comparison group. The Oral Reading Index (ORI) is derived from the Fluency and Comprehension subtests. The ORI is an overall measure of oral automaticity and reading comprehension. Jessica's Oral Reading Index score of 65 is extremely below average and is higher than 1% of other individuals in the comparison group.

#### Nelson-Denny Reading Test

The Nelson-Denny Form H was administered with the standard time administration to Jessica and includes three subtests (Vocabulary, Comprehension and Rate). The questions are presented in multiple-choice answer options. Four scores are calculated: Rate, Vocabulary, Comprehension and Total Reading. The first subtest, Rate, is calculated from the number of words read silently during the first sixty seconds of the Comprehension subtest. The Vocabulary subtest has a standard time limit of fifteen minutes and consists of 80 multiple-choice items, each with five response options. The words were drawn from high school and college textbooks and vary in difficulty. The second subtest, Comprehension, has a standard time limit of twenty minutes and requires examinees to read as many of the seven passages as they can (also drawn from high school and college textbooks) and to respond to as many of the total of 38 multiple-choice questions about the contents of these passages. The Total Reading score is derived by summing the Vocabulary raw score with the Comprehension raw score.

Jessica completed Form H and her performance was compared to second semester grade-16 university students. Jessica's Rate score is far below average, at the 1<sup>st</sup> percentile rank. She correctly answered 49 of the 52 Vocabulary items (94%) she was able to attempt during the standard time limit. Her Vocabulary score is below average, at the 11<sup>th</sup> percentile rank and is a 13.1 grade-equivalent score. She correctly answered 17 of the 18 Comprehension items (94%) she was able to attempt during the standard time limit. Jessica's Comprehension score is far below average, at the 2<sup>nd</sup> percentile rank and is an 8.7 grade-equivalent score. Her Total Reading score is well below average, at the 4<sup>th</sup> percentile rank and is a 10.6 grade-equivalent score.

Jessica's performance was also compared with second semester grade-12 high school students. This comparison resulted in a Rate score that is far below average, at the 1<sup>st</sup> percentile rank. Her Vocabulary score is average, at the 54<sup>th</sup> percentile rank compared to high school seniors. Jessica's Comprehension score is low average, at the 18<sup>th</sup> percentile rank compared to high school seniors. Her Total Reading score is average, at the 33<sup>rd</sup> percentile rank compared to high school seniors.

The Nelson-Denny was originally normed to allow for the individual's performance to be compared to other individuals in grades 9 through 16. Additional norms for healthcare professionals were developed in 2001. These norms were developed from a group of 635 medical students, 269 dental students, 176 physical therapy students and 42 interns (Haight, P.A., & Walls, R.T. Adult Learners: New Norms on the Nelson-Denny Reading

Test For Healthcare Professionals. Reading Psychology 2002, 23, 217-238). Jessica's performance was compared to this group. Her Rate score is in the Far Below Average range, at the 1<sup>st</sup> percentile rank. Her Vocabulary score is in the Far Below Average range, at the 1<sup>st</sup> percentile rank. Jessica's Comprehension score is also in the Far Below Average range, at the 1<sup>st</sup> percentile rank. Her Total Reading score is in the Far Below Average range, at the 1<sup>st</sup> percentile rank.

### **Discussion and Summary**

The Test of Memory Malinger (TOMM) measure is a symptom validity measure and was administered to detect whether Jessica was making suboptimal effort, either consciously or unconsciously. The examinee is not informed as to the purpose of this measure and in fact was told that it measured an important memory component underlying reading skill. The absence of indication of suboptimal effort on the TOMM is an indication that Jessica's effort was not suboptimal. Her performances on reading and writing tests was also highly variable, ranging from average to below average. In the context of her request for accommodations due to a reading impairment, the reading and writing scores that are within the average range are inconsistent with poor effort from either conscious or unconscious intent. Jessica's overall demeanor and pattern of test scores reflect maximum effort on her part and it is concluded that her current test scores are an accurate measure of her functioning.

The Full-Scale IQ (FSIQ) composite score is derived from ten subtest scores and is usually considered the most representative estimate of global intellectual functioning. Jessica's FSIQ score is within the high average range and exceeds those of approximately 87% of individuals her age (FSIQ=117; 95% confidence interval=113-121). She performed slightly better on nonverbal than on verbal reasoning tasks, but there is no meaningful difference between Jessica's ability to reason with and without the use of words. However, her Processing Speed Index score of 79 is significantly and uncommonly below the Verbal Comprehension Index and the Perceptual Reasoning Index scores. Consequently, her FSIQ score does not accurately reflect her optimum intellectual ability. Jessica's optimum intellectual capacity is most accurately reflected in the General Ability Index (GAI), which is calculated from the VCI and PRI subtests and does not include the attention related Working Memory Index and Processing Speed Index subtest score. Jessica's GAI score is significantly higher than her FSIQ score by a very uncommon margin estimated to occur in only 0.4% of the general population. Jessica's GAI score of 132 is in the very superior range and is higher than 98% of other adults her age.

Current diagnostic criteria for a diagnosis of a specific learning disorder in the DSM-5 requires that reading, writing or math scores be substantially below average compared to other individuals Jessica's age and cause a significant interference with academic performance. However, the designation of "average" and "below average" is acknowledged to be arbitrary with no clear cut-off score to indicate what is below average and causes significant interference with academic performance. A standard score of 78 or less, which is below the 7<sup>th</sup> percentile, offers the greatest diagnostic certainty. However, scores vary because of test imprecision, and clinical judgment is allowed. A more lenient threshold of scores of below one standard deviation (standard score 84 or lower) is applicable when learning difficulties are supported by converging evidence from assessment, academic history and school reports. While learning difficulties are generally exhibited during the early school years, they may not become evident until later school years when demands on academic skills

exceed the individual's restricted capacities. Some individuals with impaired functioning may obtain average or better grades that are achieved through extraordinarily high levels of effort and support until the pace of completing tasks and assessment mechanisms that rely on the impaired skill exceeds the individual's compensatory strategies. Consequently, the individual with specific impairments is unable to complete tasks that rely on the impaired skills or demonstrate what she has actually learned through assessment mechanisms that rely on these specific skills. A discrepancy between aptitude and academic achievement scores is no longer a DSM-5 diagnostic criteria indicating a specific learning disorder; however, the presence of substantial discrepancies between aptitude and achievement skill provide important information reflecting an abnormal degree of struggle that persists despite compensatory efforts.

Jessica's Mathematics Composite (MC) score of 133 is in the far above average range and above those of 99% of other adults her age. Consequently, a specific learning disorder with impairment in mathematics is not indicated.

The specific learning disorder of developmental dyslexia is a neurologically-based condition that results in an unexpected difficulty acquiring an understanding of letter-phoneme relationships, acquiring a capacity for efficiently processing phonological information, or developing rapid, automatic reading fluency (either oral or silent). A persistent weakness in phonological processing significantly impedes developing accurate word recognition, automatic, effortless word recognition-fluency and reading comprehension. Reading fluency is considered to be a complex capacity to read passages rapidly, smoothly, and automatically, with little effort or conscious attention to the mechanics of reading, which then allows the majority of mental capacity to be directed to reading comprehension. Dyslexic readers may be able to acquire the capacity to accurately identify or decode words through remedial efforts, but typically have difficulty acquiring automatic oral reading fluency or rapid silent reading rate. Some dyslexic readers may develop the capacity for rapid oral reading fluency or rapid silent reading, but typically at the expense of reading comprehension. The dyslexic reader lags behind the non-dyslexic reader in developing automatic word recognition capacity and must use more of his or her attention and working memory capacity to the task of identifying words than the non-dyslexic reader, which interferes with comprehension.

Many dyslexic readers compensate for the limitations in automatic word recognition through over-relying on the use of the context. The reliance on context results in the reader being hesitant and pausing in order to infer the identity of words from the surrounding words they can identify. They may make an "educated guess" when they reach an unknown word or correct a word they realize they have misread because of their restricted automaticity. They may also misread a word only to read on and realize their mistake from the context and then reread the phrase or sentence with the correct word (although sometimes a still incorrect word) inserted. The result of such an overreliance on context is a monotone prosody that is characterized by short, choppy word groupings, some word-by-word reading, pauses, omissions, added words, rereading or self-corrections. By contrast, non-dyslexic readers' phonological skills increase with practice and they become automatic in their word recognition with little need to rely on the context of the words previously identified. Automaticity occurs without conscious thought or effort and leaves more cognitive resources available for attention, comprehension and retention.



Dyslexic readers may score well on a test of reading comprehension by using context, but they are spending more of their mental energy to do so than the non-dyslexic reader. The dyslexic reader's comprehension capacity is therefore fragile and prone to errors. They may manage to function at seemingly adequate levels during a relatively brief test of reading, but still have difficulty sustaining such comprehension levels because of mental fatigue. Therefore, reading performance can be erratic.

Impaired dyslexic readers frequently encounters words in print that are within their vocabulary and that they have seen before, but remain unfamiliar when presented in print. In place of oral reading fluency that results from effortless automatic word recognition, the impaired dyslexic reader has to rely on compensatory strategies such as overreliance on the context of the passage and/or repeatedly reading the same passage to identify unrecognized words through inference from surrounding words. As a result, the dyslexic reader may achieve accurate word reading through very slow, careful reading and rereading of passages. Alternatively, when reading rapidly, uncertainty and impaired oral reading fluency will be revealed through limited voice inflection (prosody), halting two-to-four word phrases, repetitions, omitted words, added words and mispronounced words, which often results in inconsistent reading comprehension.

Jessica exhibited a pattern of reading scores typical of the dyslexic reader described above. The previous evaluation utilized an instrument that did not provide a comprehensive assessment of the component skills involved in efficient practical reading exhibited by the non-impaired reader, which encompasses most people in the general population. Jessica's basic reading skills are within the average range when not limited by time restrictions as measured by the WIAT-III Basic Reading Composite score of 96, which is higher than 39% of other adults her age. Jessica's grasp of basic phonics is in the average range as measured by the WIAT-III Pseudoword Decoding score of 95 that is higher than 37% of other adults her age. Jessica's WIAT-III Word Reading score of 100 is in the average range and she was able to read single words fairly accurately.

The WIAT-III Word Reading and Pseudoword Decoding subtests also have an additional separate component measure of the speed at which she read the list of words. The examinee is covertly timed on the WIAT-III Basic Reading subtests. The examinee is instructed to read the lists as well as they can, but the instructions specifically avoid any mention of speed, or that they are being timed, and no timing device was visible to Jessica. The efficiency and speed at which she read these pseudowords was slower than 95% of other adults her age and the efficiency at which she read these real words was slower than 98% of other adults her age.

Jessica's reading rate and level of oral reading fluency was further assessed through four different measures. The WIAT-III Oral Reading Fluency subtest and the Gray-Oral Reading Tests-Fifth Edition measure speed and accuracy of word decoding in passages with conceptually connected content, which allow for observations of her degree of automatic oral word recognition and decoding. The WJ-4 Reading Rate Cluster and the Nelson-Denny Reading Test are measures of silent reading fluency, which rely on how many reading comprehension tasks are correctly completed within a set time limit. Overall, measures of her reading fluency encompassing reading speed resulted in performances that were well below average and far below average compared to other individuals her age and grade level. Jessica obtained a WIAT-III Oral Reading Fluency score of 67, which is in the far below average range and reflects a relative weakness with oral reading fluency. Her GORT-5 oral reading was very slow and replete with many accuracy errors. Her GORT-5 Rate scaled score of 3 is higher than

1% of other individuals from a group of individuals age 19 years through 23 years, and her Accuracy scaled score of 5 is higher than 5% of other individuals from that group. Her Fluency scaled score of 4, which is a combination of the Rate and Accuracy performance, is in the well below average range and is higher than only 2% of the comparison group.

The WJ-4 Reading Rate Cluster and the Nelson-Denny Reading Test are measures of silent reading fluency that rely on the number of correct responses to reading comprehension items completed within a time limit. The WJ-4 Reading Rate Cluster measures reading speed by way of the number of correct responses completed and is derived from the time-limited Sentence Reading Fluency and time-limited Word Reading Fluency subtests. Jessica's Reading Rate Cluster score of 66 is in the Far Below Average range and is higher than 1% of other adults her age. Jessica was only able to read three of the seven NDRT passages and attempted only 47% of the 38 Comprehension items on the standard-time Comprehension administration. She correctly answered 94% of the Comprehension items she attempted. A majority of high school seniors were found to be able to read all seven passages and attempt all 38 Comprehension items. In addition, Jessica's Nelson-Denny Rate score was lower than 99% of high school seniors.

Jessica's reading comprehension was measured both by means that were not influenced by being required to read quickly or restricted by time limits and by measures that required her to read quickly or were restricted by time limits. Her reading comprehension performance was in the average range when not impacted by speed or time limits. Her reading comprehension performance was in the below average range when impacted by speed or time limits. The WIAT-III Reading Comprehension subtest reflects reading comprehension under conditions when reading is untimed. She obtained a WIAT-III Reading Comprehension subtest score of 94 that is in the Average range and is higher than 34% of other individuals her age.

The GORT-5 Comprehension subtest and the Nelson-Denny Reading Test reflects reading comprehension under conditions when speed is emphasized or time is restricted. On the GORT-5, Jessica was specifically instructed to read passages out loud "as carefully and as quickly as you can." The GORT-5 passage was then removed from sight after she completed the passage and she was asked five open-ended questions about the content of the passage. Her GORT-5 Comprehension scaled score of 3 is in the far below average range and is higher than only 1% of the comparison group. The Nelson-Denny Reading Test (NDRT) measured her performance on a timed test. She correctly answered 94% of the Comprehension items she was able to attempt during the standard twenty-minute time limit. Jessica's NDRT Comprehension score is near the bottom of the low average range at the 18<sup>th</sup> percentile compared to grade-12 students, in the Far Below range at the 2<sup>nd</sup> percentile compared to grade-16 university students, and in the Far Below Average range at the 1<sup>st</sup> percentile compared to medical and healthcare students.

Jessica's pattern of reading scores is consistent with the pattern typically exhibited by dyslexic readers who have developed strategies to compensate for their reading impairment. Jessica's overall basic reading skills are in the average range as measured by the WIAT-III Basic Reading Composite score of 96, which reflects word decoding skills under untimed conditions. She has been able to acquire an average level of reading comprehension skills when allowed sufficient time to employ compensatory strategies, but exhibits

persistently impaired reading rate and reading fluency compared to other adults her age, as reflected in WJ-4 Reading Rate Cluster, the GORT-5 Fluency and the Nelson-Denny Rate and Comprehension scores.

Although discrepancies between reading scores and aptitude scores are no longer one of the diagnostic criteria, such discrepancies reflect the frequency of the degree of unexpected struggle that occurs in the general population. Jessica's WIAT-III Total Reading Composite score of 85 is significantly below her Mathematics Composite score of 133 by a very uncommon margin estimated to occur in less than 1% of other individuals in the general population, which is a reflection of the difficulty she has experienced specific to acquiring reading skills. Her WIAT-III Mathematics Composite score of 133 is commensurate with an expected score of 120 predicted by her GAI score. However, all of her WIAT-III reading composite scores are significantly below expectation whether the expectation is measured with the FSIQ or the GAI score. Jessica is expected to have a WIAT-III Reading Comprehension and Fluency Composite score of 112 predicted from her FSIQ score but her actual Reading Comprehension and Fluency Composite score is 74. This is a very uncommon discrepancy of 38 points estimated to occur in 1% or less of other adults. Similar very uncommon discrepancy margins can be seen between her predicted scores and her actual WIAT-III Basic Reading Composite and Reading Comprehension-Fluency Composites with even larger discrepancies based on her GAI score. Jessica's history and pattern of reading scores indicate and warrant a diagnosis of Specific Learning Disorder with impairment in reading that involves reading rate, reading fluency and reading comprehension. Her impairment in reading is exacerbated by the effects of ADHD. The severity of her impairment in reading is severe.

Double the usual time for any timed test is recommended because of Jessica's very slow reading speed and difficulty comprehending the content of passages. The letter of September 11, 2018, from Dr. Farmer denying extended time stated that the 2017 evaluation by Dr. Lewandowski reported that "your reading, spelling and arithmetic are normal to above normal." However, the only test of her reading skills used by Dr. Lewandowski was the Wide Range Achievement Test-4<sup>th</sup> Edition (WRAT-4), which does not measure reading speed, reading fluency or the impact of these on comprehension. The WRAT-4 is considered to be an insufficient instrument as the primary assessment of reading, writing, or math skills. The USMLE Guidelines for Testing Accommodations specifically states, "The Nelson-Denny Reading Test (NDRT) and Wide Range Achievement Test (WRAT) are not comprehensive diagnostic measures of achievement and therefore neither is considered acceptable if used as the sole measure of reading ability or academic skills."

Dr. Farmer also stated that "documentation does not demonstrate a developmental history of impaired scholastic skills." Although not formally identified in her academic records, the records she provided this examiner reflect specific statements by her (and referred to in Dr. Lewandowski's report) about the difficulty she experienced from her earliest elementary years in acquiring reading and writing skills. Dr. Farmer cited her high school grade point average as proof that she did not reflect developmental history of impaired academic functioning when in fact she stated that she achieved her high grades because of the inordinate amount of time she had to devote to school work when compared to other students, as well as the informal accommodations she received. Dr. Farmer further cited her scores on the ACT and MCAT as proof that her academic functioning was not impaired. The ACT and MCAT are not comprehensive diagnostic measures of reading or other academic skills any more than the WRAT is, and the scores she managed to attain are as

much a reflection of the compensatory effects of her superior intellect rather than an absence of reading impairment. While her scores on the ACT and the MCAT were good, she may have scored significantly higher if she had taken these tests with accommodations of a separate room and extended time. Consequently, the ACT and MCAT scores do not provide an indication of the negative impact of her reading disability.

It is noteworthy that recent students with her MCAT score, while good at the 79<sup>th</sup> percentile combined with her college GPA, only had an acceptance rate of 38% according to the Association of American Medical Colleges. Dr. Farmer also stated in reference to Dr. Lewandowski's evaluation that "Your evaluator's conclusions notwithstanding, he reports that her performances on a computerized measure of attention-related problems, the Conners Continuous Performance Test Third Edition (CPT-3) are normal." However, according to a leading ADHD researcher and specialist, "... a sizable minority of adults with ADHD can perform these tests sufficiently well to make for an unacceptable level of false negatives for these tests."<sup>1</sup> The DSM-5 specifically states that, "Inattentive behavior is associated with various underlying cognitive problems on tests of attention, executive function, or memory, although these tests are not sufficiently sensitive or specific to serve as diagnostic indices." Consequently, neuropsychological tests including continuous performance tests, can provide supplementary evidence for ADHD, but seemingly normal performance cannot be used to rule out the condition.

Jessica's writing skills are in the middle of the average range compared to other adults her age as measured by the WIAT-III Written Expression Composite score of 100, which is as high or higher than 50% of other adults her age. The subtests and component scores are also within the average range for her age. Consequently, a specific learning disorder with impairment in written expression is not indicated. However, Jessica's WIAT-III Written Expression Composite score of 100 is significantly below an expected score of 119 predicted by her GAI score of 132 and by an uncommon margin estimated to occur in 10% or less of the general population. This pattern represents a significant relative weakness performing writing tasks, which is presumed to be a consequence of her reading disorder and the ADHD. Jessica can be expected to be relatively slow at organizing and expressing her thoughts in writing at a level commensurate with her intelligence, which is reflected in the distinct weakness she exhibited with general processing speed as measured by the WAIS-IV. Consequently, additional time is needed on writing tasks in order to perform at a level commensurate with her intelligence.

Jessica Ramsay is a 28-year-old, single female medical student with superior intelligence who has a long history of inattention, distractibility and hyperactivity that have significantly interfered with academic functioning since early childhood. Jessica has been able to perform well academically, but has had to rely on extraordinary compensatory strategies in order to do so. Jessica's academic and behavioral history reflect DSM-5 diagnostic criteria indicating ADHD, Combined Presentation.

Jessica reported often experiencing 17 of the 18 DSM-5 criteria symptoms associated with ADHD that have persisted for at least the past six months with most having been present since her earliest years in school. The persistently frequent manifestation of these symptoms was corroborated by her mother and her fiancé. On a

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<sup>1</sup> Barkley, R., Murphy, K., Fischer, M. (2008). ADHD IN ADULTS: What The Science Says (p. 433). New York, NY: The Guilford Press.

systematic rating score of the frequency of occurrence of the DSM-5 ADHD symptoms, Jessica endorsed 17 (her mother, 14 and fiancé, 11) of the 18 criteria that are associated with a diagnosis of ADHD. Only 5 inattention or 5 hyperactive-impulsive symptoms are required to be frequently and persistently present over the previous six months. The ADHD symptoms described or endorsed by Jessica, her mother and fiancé are prominently exhibited at school, at her home and with her interpersonal relationships. These symptoms were reported by Jessica and corroborated by her mother to have interfered with and reduced the quality of her academic functioning and her daily adaptive functioning since her earliest school years.

The available school records do not clearly reflect academic struggles in elementary, middle or high school, but this is a result of the family obtaining help on an informal basis, which was very successful in preventing poor academic grades, and therefore masked the degree of struggle Jessica experienced during these years. In addition, the specificity of Jessica's descriptions, which are corroborated by her mother, attest to the presence of such struggle. Although Jessica has worked hard at compensating for her deficits, her symptoms have continued to significantly interfere with her life. Results of the IVA+Plus, a computerized test of sustained attention and distractibility, reflect a severe impairment compared to other adults her age. In addition, her WAIS-IV Processing Speed Index score at only the 8<sup>th</sup> percentile for her age reflects a weak cognitive efficiency highly associated with ADHD. Jessica's symptoms are not better explained by any other psychiatric or medical condition. Her medical exams with her physician do not indicate a physical disorder or disease other than ADHD and a Specific Learning Disorder with impaired reading that would account for her ADHD symptoms or academic difficulties. Jessica's mental status and the magnitude of her psychological symptoms do not indicate a psychological condition severe enough to account for her ADHD symptoms or her academic difficulty. Jessica has also experienced longstanding feelings of discouragement, frustration, and anxiety which are best understood to be a direct secondary consequence of her underlying ADHD symptoms. Consequently, a diagnosis of ADHD, Combined Presentation is warranted in addition to a Specific Learning Disorder with impairment in reading.

**Diagnosis: DSM-5 criteria synchronized with ICD-10-CM numerical coding**

1. Specific Learning Disorder with impairment in reading (developmental dyslexia): reading comprehension, severely impaired reading rate and fluent word recognition, 315.00 (F81.0)
2. Attention-Deficit/Hyperactivity Disorder Combined Presentation 314.01 (F90.2)


**Recommendations:**

1. Jessica's pattern of reading and writing scores is typical of the intelligent dyslexic reader who struggles with efficient decoding and processing of the printed words, but can use her intelligence to substantially compensate and extract seemingly adequate comprehension from passages. However, the intelligent dyslexic reader's reading comprehension is fragile and susceptible to abrupt lapses and failure that interferes with academic achievement commensurate with her intelligence. Jessica's level of reading impairment is severe and can be expected to significantly and substantially interfere with educational efforts without accommodations such as extended time. Her impaired reading skills significantly interfered with her performance on the Nelson-Denny Reading Test because of the standard time limit. Jessica correctly answered most of the items she attempted on Nelson-Denny Reading Test, but she indicated this required her to reread passages multiple times in order to gain adequate comprehension. Consequently, her percentile rank scores were severely limited because of the time constraints. Jessica correctly completed 94% of the Comprehension items she attempted, but was only able to attempt 47% of the Nelson-Denny Comprehension items during the standard time limit.

Consequently, it is recommended that Jessica receive at least double the standard time allowed for tests and exams. Any classroom test or standardized test administered without the accommodation of extended time (double) will not be an accurate and valid measure of Jessica's knowledge in a given area. Likewise, Jessica's weakness in writing can be expected to significantly and substantially interfere with educational and assessment efforts without accommodations such as extended time. Any tests administered without extended time (at least double) should be regarded a significant and substantial under-representation of Jessica's actual abilities and knowledge, which impairs her access to the exam. Therefore, it is also recommended that at a minimum she be allowed extended time (double the standard time) for any classroom tests, standardized tests and classroom assignments.

2. At least 100% additional test time (double time) is also recommended because of her inattention, distractibility, and slow information processing. This should be used in conjunction with a private, quiet room and additional break time to address basic needs and to adequately manage ADHD symptoms and her medical disorders. Any test administered without these accommodations will not be an accurate measure of what she knows about the subject being assessed.
3. The use of a computer, computer word-processing software with spell-check, and extended time is recommended for any classroom tests or standardized tests that involves writing. The extended time is also necessary to adequately utilize any assistive technology for reading and writing.
4. Reading material should also be provided to Jessica in audio recorded format. An online certification has been completed to allow her to apply for a Learning Ally ([learningally.org](http://learningally.org)) membership.

5. Tutorial support and assistance from the college academic support services for her reading and writing problems is recommended as needed to help Jessica function at a level commensurate with her intellectual abilities.
6. Remedial reading instruction following the Orton-Gillingham approach may be beneficial for her dyslexia and is recommended for consideration. This is available through MDI. However, this is a slow process and unlikely to benefit her while she is in medical school. Also, improvement of reading fluency is uncertain and it is unknown what benefit, if any, she may obtain from such instruction.
7. Continue treatment through her physician for ADHD with medications such as Concerta, Adderall, Intuniv, Strattera, Vyvanse, Wellbutrin or Provigil.



Robert D. Smith, PhD  
Licensed Psychologist  
Neuropsychologist



National Board of Medical Examiners  
3750 Market Street  
Philadelphia, PA 19104-3102

215-590-9500 phone  
www.nbme.org

**Confidential**

February 14, 2019

**Via E-mail to [jessica.ramsay@med.wmich.edu](mailto:jessica.ramsay@med.wmich.edu)**

Jessica E. Ramsay  
6862 Tall Oaks Dr  
Apt 3B  
Kalamazoo, MI 49009

RE: USMLE Step 1

USMLE ID#: 5-366-431-4

Dear Ms. Ramsay:

We have thoroughly reviewed your request for reconsideration of our decision regarding test accommodations for the United States Medical Licensing Examination (USMLE) Step 1. We conducted an individualized review of your request and supporting documentation in accordance with the guidelines set forth in the Americans with Disabilities Act (ADA).

The NBME carefully considers all evidence in determining whether an individual is substantially limited within the meaning of the ADA and what, if any, accommodations are appropriate to the particular Step exam context. Submitted documentation including the individual's personal statements; letters from providers and advocates; and objective information such as school records and scores obtained on high stakes tests taken with and without accommodations are thoroughly reviewed.

Supporting documentation submitted from qualified professionals is a necessary part of any request for accommodations and is carefully reviewed by the NBME. Though not required to defer to the conclusions or recommendations of an applicant's supporting professional, we carefully consider the recommendation of qualified professionals made in accordance with generally accepted diagnostic criteria and supported by reasonable documentation.

In a November 6, 2018 report of Neuropsychological Evaluation for Learning Problems, Robert D. Smith, Ph.D. writes that you sought evaluation as part of your appeal for testing accommodations for the USMLE. Dr. Smith writes, "*Jessica's basic reading skills are within the average range when not limited by time restriction as measured by the WIAT-III Basic Reading Composite score of 96, which is higher than 39% of other adults her age...The WJ-4 [sic] Reading Rate Cluster and the Nelson-Denny Reading Test are measures of silent reading fluency that rely on the number of correct responses to reading comprehension items completed within a time limit...Jessica was only able to read three of the seven NDRT passages and attempted only 47% of the 38 Comprehension items on the standard-time Comprehension administration. She correctly answered 94% of the Comprehension items she attempted...In addition, Jessica's Nelson-Denny Rate score was lower than 99% of high school seniors...Jessica's pattern of reading scores is consistent with the pattern typically exhibited by dyslexic readers who have developed strategies to compensate for their reading impairment...She has been able to acquire an average level of reading comprehension skills when allowed sufficient time to employ compensatory strategies, but exhibits persistently impaired reading rate and reading fluency compared to other adults her age, as reflected on WJ-4 [sic] Reading Rate Cluster, the GORT-5 Fluency and the Nelson-Denny Rate and Comprehension...Jessica has been able to perform well academically, but has had to rely on extraordinary compensatory strategies in order to do so.*"




Although your evaluator appears to accept your exceptionally low scores on timed reading tests administered for the purpose of requesting test accommodations as valid and credible, your average and above average range performances on timed standardized tests taken for the purpose of gaining admission to college and medical school demonstrate that your skills are better than most people in the general population. Regarding your performance on the MCAT taken under standard time conditions, Dr. Smith reports that you relied on strategies such as answering questions before reading the passages, a common strategy recommended by prep courses and utilized by savvy students. He writes, "...Jessica was able to obtain a good score in the 79<sup>th</sup> percentile (30M) of students who take the exam. This, however, was not the exceptional MCAT scores that would have been expected with her intelligence and understanding of the material. Jessica's performance on the MCAT component sections reflected her relative weakness specific to reading tasks with a Verbal Reasoning score at the 67<sup>th</sup> percentile, a Physical Sciences score at the 79<sup>th</sup> percentile and a Biological Sciences score at the 88<sup>th</sup> percentile... While her scores on the ACT and the MCAT were good, she may have scored significantly higher if she had taken these tests with accommodations of a separate room and extended time."

It's not uncommon for students to feel disappointed when they do not achieve the score they expected and believe that they could or would have obtained an exceptional score with additional testing time. Benefiting from additional time is not evidence of need for accommodations or evidence of a disability. Research shows that extended time accommodations benefit students without<sup>1</sup> disabilities, and are viewed as beneficial by most nondisabled postsecondary students<sup>2</sup> contemplating taking high-stakes standardized tests.

Accommodations are provided when there is clear and credible documentation of functional impairment and a rationale to demonstrate that the requested accommodation is appropriate to the setting and circumstance. Your documentation with regard to learning disabilities and ADHD offers no objective evidence of impaired reading or pervasive ADHD symptoms that limited any major life activity compared to most people in the general population. Your request for reconsideration provided no new substantive information or evidence that alters our decision communicated in my September 11, 2018 letter notifying you that you that we will provide the following accommodation(s) for the USMLE Step 1 for which you are currently registered:

- **Additional break time - testing over two days:** The exam will be administered over two days. Day one will be 5 hours in length and will include a 15 minute tutorial and 7 blocks with approximately 20 questions per block. Day two will be 4 hours 45 minutes in length and will include 7 blocks with approximately 20 questions per block. You will have up to 30 minutes to complete each block. You will receive 75 minutes of break time each day, including lunch. You may use break time as needed between blocks. If you complete the tutorial or an examination block in less time than allotted, the unused time will be added to your available break time.
- **Separate testing room in which you may stand, walk or stretch during exam**
- **Permission to read aloud**

Sincerely,



Catherine Farmer, Psy.D.  
Director, Disability Services  
ADA Compliance Officer, Testing Programs

C: Lawrence D. Berger, Esq. via e-mail to [larry@rcglawoffices.com](mailto:larry@rcglawoffices.com)

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<sup>1</sup> See, for instance, Cahan, S., Nirel, R., & Alkoby, M. (2016). The Extra-Examination Time Granting Policy: A Reconceptualization. *Journal of Psychoeducational Assessment*, 34(5), 461-472.

<sup>2</sup> See Lewandowski, L., Lambert, T. L., Lovett, B. J., Panahon, C. J., & Sytsma, M. R. (2014). College students' preferences for test accommodations. *Canadian Journal of School Psychology*, 29(2), 116-126.

REISMAN ■ CAROLLA ■ GRAN ■ ZUBA LLP

19 Chestnut Street  
Haddonfield, NJ 08033  
P: 856.354.0021  
F: 856.873.5640  
www.rcglawoffices.com

Catherine Merino Reisman ♦  
Amelia Carolla\*  
Judith A. Gran\*\*  
Sarah E. Zuba\*

♦Admitted in NJ, PA & NY  
\*Admitted in NJ & PA  
\*\*Admitted in PA

Lawrence D. Berger\*  
Of Counsel  
larry@rcglawoffices.com  
Direct dial: 856.354.0021

March 19, 2019

By priority mail and by e-mail to [disabilityservices@nbme.org](mailto:disabilityservices@nbme.org)

Catherine Farmer, Psy.D.  
Director, Disability Services  
National Board of Medical Examiners  
3750 Market Street  
Philadelphia, PA 19104-3102

**Re: Appeal of Jessica Ramsay  
USMLE Step 1  
USMLE ID#: 5-366-431-4**

Dear Dr. Farmer:

I represent Jessica Ramsay and I am submitting this letter on her behalf to request that the National Board of Medical Examiners ("NBME") further reconsider your September 11, 2018 and February 14, 2019 letters, to the extent you denied Ms. Ramsay's request for extended testing time.

Previously, you have granted Ms. Ramsay's request for additional break time, and a separate testing room, and also granted permission to read aloud. However, you have denied the request for additional test time (double time), and we request further reconsideration of that decision.

The USMLE web-site states that reconsideration requests must be based on "new substantive supporting documentation."<sup>1</sup> When such documentation is supplied, NBME is therefore obligated to give the new information good faith consideration. Ms. Ramsay spent additional time and resources to obtain such documentation: the report of Dr. Smith. As described in his report, and below, Dr. Smith administered additional assessments to measure Ms. Ramsay's reading speed and reading fluency. Your February 14, 2019 reflects a complete absence of any consideration for the new information submitted by Ms. Ramsay. Therefore, I

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<sup>1</sup> Found on the Internet at <https://www.usmle.org/test-accommodations/guidelines.html>.

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am not submitting any additional information, but rather am requesting that NBME now consider the additional information that has been submitted.

Ms. Ramsay has already experienced significant delay because NBME denied her prior application for accommodations. She has already taken Step 1 and could not obtain a passing score because she did not have the accommodations that she needed. Her current application for accommodations was submitted in June 2018, and she then obtained an additional evaluation to meet your objections. As a result of these delays, Ms. Ramsay has already been delayed for over 18 months in continuing her medical education. In addition to my request for prompt and meaningful consideration of Dr. Smith's report, I request that you refer this matter to NBME's trial attorney to avoid further delay.

**1. NBME Improperly Refused To Grant Additional Test Time, Based Upon Ms. Ramsay's Use Of Mitigating Measures During Prior Examinations, A Consideration Which The ADA As Amended Expressly Forbids.**

Your letter states that you denied Ms. Ramsay's request for accommodations because on prior examinations, she was able to mitigate the effects of her disability by using strategies which reduced the amount of material that she was required to read. This is a legally irrelevant fact. (It is also factually erroneous because these strategies are not effective for the USMLE examinations, which are much more reading intensive.) As a result of your improper consideration of this legally irrelevant fact, you simply ignored the evidence that Ms. Ramsay is a person with a disability. Your stated reason for denying Ms. Ramsay's request is contrary to the express requirements of the Americans with Disabilities Act ("ADA"), and particularly 42 U.S.C. §12102(4)(E) as amended by the ADA Amendments Act of 2008.

The cited provision of the ADA, as added by the ADA Amendments Act, states:

(i) The determination of whether an impairment substantially limits a major life activity shall be made without regard to the ameliorative effects of mitigating measures such as —

\* \* \* \*

(IV) learned behavioral or adaptive neurological modifications.

42 U.S.C. §12102(4)(E)(i)(IV).

In your February 14, 2019 letter, you expressly acknowledge that Ms. Ramsay's "scores on timed reading tests administered for the purpose of requesting test accommodations" are — using your words — "exceptionally low." You do not challenge the accuracy of Dr. Smith's testing and reporting. As noted by Dr. Smith, he also administered the Test of Memory Malingered ("TOMM"). Ms. Ramsay was told that this was a test that "measured important

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memory skills needed for efficient reading.” Smith Report at 8. The TOMM results, combined with Dr. Smith’s observations, led him to conclude that there was no indication of sub-optimal effort and that Ms. Ramsay made “strong effort on all tests administered to her.” *Id.* The Department of Justice has specifically stated that “Reports from qualified professionals who have evaluated the candidate should take precedence over reports from testing entity reviewers who have never conducted the requisite assessment of the candidate for diagnosis and treatment. This is especially important for individuals with learning disabilities because face-to-face interaction is a critical component of an accurate evaluation, diagnosis, and determination of appropriate testing accommodations.”<sup>2</sup>

As summarized by Dr. Smith, and quoted by you in your February 14, 2019 letter:

Jessica’s pattern of reading scores is consistent with the pattern typically exhibited by dyslexic readers who have developed strategies to compensate for their reading impairment. . . . She has been able to acquire an average level of reading comprehension skills *when allowed sufficient time to employ compensatory strategies*, but exhibits persistently impaired reading rate and reading fluency *compared to other adults her age*, as reflected on WJ-4 [sic] Reading Rate Cluster, the GORT-5 Fluency and the Nelson-Denny Rate and Comprehension.

\* \* \* \*

. . . . Jessica has been able to perform well academically, but has had to rely on *extraordinary compensatory strategies* in order to do so. . . .

Smith Report at 26 and 28 (emphasis added), quoted in your letter at 1.

Despite Ms. Ramsay’s “strong effort,” she received “exceptionally low” scores which corroborate Dr. Smith’s diagnosis of Specific Learning Disorder with impairment in reading, and Attention-Deficit/ Hyperactivity Disorder Combined Presentation. These disabilities prevent Ms. Ramsay from fairly accessing the Step 1 examination, and therefore demonstrate that she is entitled to extended testing time as an accommodation. Dr. Smith’s findings are consistent with those of other physicians and evaluators, submitted with Ms. Ramsay’s original application, but are more recent and include additional evaluation instruments to measure Ms. Ramsay’s reading speed and reading fluency.

The only stated reason for ignoring the “exceptionally low” scores, and Dr. Smith’s diagnosis, is that on prior standardized examinations, Ms. Ramsay received scores within the

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<sup>2</sup> U.S. Department of Justice, “Testing Accommodations,” found on the Internet at [www.ada.gov/regs2014/testing\\_accommodations.html](http://www.ada.gov/regs2014/testing_accommodations.html).

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average range which you inaccurately describe as “above average,”<sup>3</sup> by “rel[ying] on strategies such as answering questions before reading the passages, a common strategy recommended by prep courses and utilized by savvy students.” In other words, Ms. Ramsay was able to use “learned behavioral . . . modifications” on other exams, to “ameliorat[e]” the effects of her disability. These learned behavioral modifications are precisely what the ADA, as amended, says that NBME must **not** consider. See *Girard v. Lincoln College of New England*, 27 F.Supp.3d 289, 295 (D.Conn. 2014) (plaintiff’s status as a person with a disability was not refuted by evidence that she used adaptive strategies, or by evidence that she succeeded in some courses without accommodations). See also *Harty v. City of Sanford*, (M.D.Fla. 2012), No. 6:11-cv-1041 (“While he is able to ameliorate the effects of his disability by doing these things ‘in a different way,’ the ADAAA does not permit such measures to be considered”).

As the Court explained in *Girard*, in making the threshold determination of whether a person requesting accommodations is a person with a disability, a provider like NBME cannot consider the effects of learned behavioral modifications:

[Defendant’s argument that plaintiff was not disabled] is without merit because under the ADA’s new definition of disability, ***“[t]he determination of whether an impairment substantially limits a major life activity shall be made without regard to the ameliorative effects of mitigating measures such as . . . learned behavioral or adaptive neurological modifications.”*** 42 U.S.C. § 12102(4)(E)(i). Indeed, one of the stated purposes of the ADAA [the ADA Amendments Act] was “to reject the requirement enunciated by the Supreme Court in [*Sutton v. United Air Lines*, 527 U.S. 471(1999)] . . . that whether an impairment substantially limits a major life activity is to be determined with reference to the ameliorative effects of mitigating measures.” 122 Stat. 3553, Sec. 2(b); see 42 U.S.C. §12102(4)(B) (requiring courts to interpret term “substantially limits” in accordance with findings and purposes of ADAA). Because Plaintiff’s study strategies are “learned behavior” modifications, I cannot consider them in determining whether Plaintiff’s ADP [auditory processing disorder] substantially limits a major life activity.

. . . . The fact that Plaintiff’s impairment prompted a request for accommodation in a minority of classes, and proved to be an insurmountable obstacle in only one class in which an adequate accommodation was not provided does not, as a matter of law, mandate a

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<sup>3</sup> February 14, 2019 NBME letter at 2. The claim that Ms. Ramsay received “above average” scores is erroneous. On the MCAT, Ms. Ramsay’s score fell at the 79th percentile which is within the average range.

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finding that the impairment did not substantially limit Plaintiff. . . . Most importantly, resolution of this question must be guided by the clear congressional intent expressed in the ADAA [the ADA Amendments Act]. In light of the ADAA's findings and purposes, which are set forth in part above and must be considered in determining whether a person is "substantially limited," I find that the evidence in the record raises a genuine issue of material fact as to whether Plaintiff's ADP substantially limits her in any major life activity, *her partial success in overcoming her disability without accommodation notwithstanding*.

27 F.Supp.3d at 295-96 (emphasis added).

Dr. Smith concluded, and NBME agrees, that Ms. Ramsay was able to obtain an average score on the MCAT because she used such modifications. Yet, this legally irrelevant fact is the only reason given for rejecting Ms. Ramsay's appeal.

You also cite two articles in support of NBME's contention that "extended time accommodations benefit students without disabilities, and are viewed as beneficial by most nondisabled postsecondary students contemplating taking high-stakes standardized tests." February 14, 2019 letter at 2 (footnotes omitted). The question of whether non-disabled students also benefit from extended testing time is irrelevant.<sup>4</sup> Ms. Ramsay is a student with a disability. Even assuming, for the sake of argument, that non-disabled students would derive some benefit from extended test time, "students with disabilities tend to benefit more from accommodations than nondisabled students." Lovett and Lewandowski, TESTING ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES: RESEARCH BASED PRACTICE (American Psychological Association 2015) at 226. *See also* S.G. Sireci, *et al.*, "Test Accommodations for Students with Disabilities: An Analysis of the Interaction Hypothesis," REVIEW OF EDUCATIONAL RESEARCH, Vol. 75 No. 4 (Winter 2005), pp. 457-490 at 481 and 483. As Drs. Sireci, *et al.*, conclude:

This finding suggests that (a) many [students with disabilities] need extra time to demonstrate their true knowledge, skills and abilities; and (b) many educational tests are speeded to some extent.

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<sup>4</sup> Moreover, the conclusion of Lewandowski *et al.* was not that testing agencies like NBME should deny accommodations to students with disabilities, simply because the accommodations might also benefit non-disabled students. Rather, their conclusion was that "testing agencies and individual test-makers (e.g., classroom teachers and instructors) should consider liberalizing test administration conditions more generally. For instance, *testing time limits might be made more generous . . .*" Lewandowski, *et al.*, "College Students' Preferences for Test Accommodations," CANADIAN J. OF SCHOOL PSYCHOLOGY 2014, Vol. 29(2) 116 (emphasis added).

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*Id.* at 483.

NBME does grant extended testing time to students with disabilities who require extended time to fairly access the test. The only question is whether Ms. Ramsay is such a student, and given your statement that her “scores on timed reading tests” are “exceptionally low,” it is clear that she is.

**2. Based On Dr. Smith’s Report, The Accommodation That NBME Is Required To Provide Is Double Time.**

Dr. Smith’s report also supports the request for double time, and not any lesser accommodation: “Double the usual time for any timed test is recommended because of Jessica’s very slow reading speed and difficulty comprehending the content of passages. . . .” Smith Report at 27. Moreover, “At least 100% additional test time (double time) is also recommended because of her inattention, distractibility, and slow information processing.” *Id.* at 30.

Dr. Smith’s conclusion is also supported by these specific findings:

- Ms. Ramsay’s WAIS-IV Processing Speed Index is at the 8th percentile, which is 53 points (3.5 standard deviations) below her GAI score of 132. Smith Report at 10.
- Ms. Ramsay’s WIAT-III Oral Reading Fluency is at the 1st percentile. Smith Report at 16 and 18.
- Ms. Ramsay’s WJ4 Reading Rate is at the 1st percentile. Smith Report at 21.
- Ms. Ramsay’s WJ4 Reading Rate Cluster score of 66 is in the Far Below Average range, which is higher than only 1% of other individuals her age. Smith Report at 21.
- Ms. Ramsay’s GORT-5 Fluency is at the 2nd percentile. Smith Report at 22.
- Ms. Ramsay “was only able to attempt 47% of the Nelson-Denny Comprehension items during the standard time limit.” Smith Report at 30.

In addition to the evidence of Ms. Ramsay’s slow reading speed and distractibility, her need for additional extended time is shown by two of the accommodations which NBME has already granted – namely, a separate testing room in which Ms. Ramsay “may stand, walk or stretch” during the examination, and “permission to read aloud.” If Ms. Ramsay needs to “stand, walk or stretch” and “read aloud” during the examination, as NBME has recognized, then NBME must also recognize that these compensatory strategies require more time. NBME must grant the additional time which is needed.

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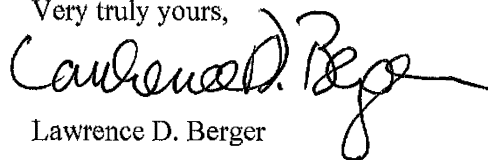
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Based on all of these objective findings, the appropriate accommodation is double time.

**Conclusion**

For the reasons stated in this letter, in Dr. Smith's report, and Ms. Ramsay's original request and appeal, I request that NBME grant Ms. Ramsay's appeal, and provide her with the additional accommodation of extended test time (double time) which she has requested.

Very truly yours,



Lawrence D. Berger

LDB/clt



**From:** [disabilityservices@nbme.org](mailto:disabilityservices@nbme.org)  
**To:** [jessica.ramsay@med.wmich.edu](mailto:jessica.ramsay@med.wmich.edu)  
**Cc:** [larry@rcglawoffices.com](mailto:larry@rcglawoffices.com)  
**Subject:** RE: USMLE Step 1 USMLE ID#: 5-366-431-4  
**Date:** Wednesday, March 27, 2019 1:32:19 PM

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ref:\_00D46pfBg.\_5004A1awCpn:ref

RE: Step 1 USMLE ID#: 5-366-431-4

Dear Ms. Ramsay:

We are in receipt of a letter dated March 19, 2019 from your attorney, Mr. Lawrence D. Berger, requesting further reconsideration of our decision regarding test accommodations for the USMLE Step 1 communicated in our letters of September 11, 2018 and February 14, 2019. Although my February 14, 2019 letter is clear with regard to the utility of the exceptionally low scores obtained by Dr. Smith in 2018, it bears repeating. Although your evaluator appears to accept your exceptionally low scores on timed reading tests administered for the purpose of requesting test accommodations as valid and credible, your average and above average range performances on timed standardized tests taken for the purpose of gaining admission to college and medical school demonstrate that your skills are better than most people in the general population.

No new information or supporting documentation was provided for our review or reconsideration. Nevertheless, as requested, Mr. Berger's March 19, 2019 letter has been forwarded to counsel.

All of your submitted documentation, including Dr. Smith's 2018 report of evaluation, was thoroughly reviewed and carefully considered. Our reviews resulted in approval of additional break time over two days and a separate testing room in which you may stand, walk, or stretch during the exam, as well as permission to read aloud. Our records show that you are currently registered for Step 1 with an eligibility period of April 1 through June 30, 2019 and that your scheduling permit was issued to you on or about February 22, 2019.

Sincerely,  
Catherine Farmer, Psy.D.  
Director Disability Services  
ADA Compliance Officer, Testing Programs  
NBME

This email message and any attachments may contain privileged and/or confidential business information and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please notify the sender immediately by reply email and destroy all copies of the original message and any attachments.

----- Original Message -----

From: Lawrence D. Berger [larry@rcglawoffices.com]  
Sent: 3/19/2019 10:02 AM  
To: disabilityservices@nbme.org  
Cc: jessica.ramsay@med.wmich.edu  
Subject: Appeal of Jessica Ramsay, USMLE Step 1, USMLE ID# 5-366-431-4

<<...>>

Attention: Dr. Farmer

Dear Dr. Farmer:

I am attaching to this e-mail my letter requesting further reconsideration of Ms. Ramsay's request for extended testing time. A hard copy is also being sent to you by Priority Mail.

For the reasons stated in the letter, I am requesting that NBME give prompt and meaningful consideration to the information in Dr. Smith's report that has not been addressed, and also refer this matter to NBME's trial attorney to avoid further delay.

Respectfully,

Lawrence D. Berger

Of Counsel

Reisman Carolla Gran & Zuba LLP

Email: Larry@rcglawoffices.com

Phone: 856-354-0021