In the United States Court of Federal Claims
OFFICE OF SPECIAL MASTERS

JEREMY HODGE, by his conservator ERIKA ELSON,	*	No. 9-453V
Petitioner,	*	Special Master Christian J. Moran
v.	*	Filed: September 12, 2022
SECRETARY OF HEALTH AND HUMAN SERVICES,	*	Obsessive-compulsive disorder ("OCD"); hepatitis B vaccine; Lyme disease; neuroborreliosis; demyelination; burden of proof; significant aggravation; collection of medical records; entitlement.
Respondent.	*	

Renee J. Gentry, Vaccine Injury Clinic, George Washington Univ. Law School, Washington, DC, for Petitioner;
Althea W. Davis, United States Dep't of Justice, Washington, DC, for Respondent.

PUBLISHED DECISION DENYING ENTITLEMENT[1]

I. Introduction

For the many reasons discussed below, this is an unfortunate and unusual case. This case has been pending for over a decade, due in large part to disputes

[1] The E-Government Act, 44 U.S.C. § 3501 note (2012) (Federal Management and Promotion of Electronic Government Services), requires that the Court post this decision on its website. This posting will make the decision available to anyone with the internet. Pursuant to Vaccine Rule 18(b), the parties have 14 days to file a motion proposing redaction of medical information or other information described in 42 U.S.C. § 300aa-12(d)(4). Any redactions ordered by the special master will appear in the document posted on the website.

regarding equitable tolling and evidentiary problems, discussed below in sections II.A and III.

The petitioner's claim is complex: Erika Elson alleges that (1) her son, Jeremy Hodge, developed Lyme disease in 2003; (2) the untreated bacterial infection progressed to a central nervous system disorder known as neuroborreliosis; (3) the Lyme disease / neuroborreliosis in turn caused him to develop obsessive-compulsive disorder ("OCD"); (4) then, the 2006 hepatitis B vaccine(s) significantly aggravated his condition. More details regarding the petitioner's position and the respondent's rebuttals are discussed below in section II.B. A recitation of the available evidence follows in section III, forming the basis for fact finding in section IV.

A primary issue pervading this case is the absence of records during the critical periods of time. It is the petitioner's burden to present preponderant evidence supporting his or her claims. Determining whether certain assertions in this case are true (on a more likely than not basis) is extremely difficult without making inferences and guesses. While special masters may draw plausible inferences, it is improper to be arbitrary or capricious when determining facts. Hines v. Sec'y of Health & Hum. Servs., 940 F.2d 1518, 1528 (Fed. Cir. 1991). Guesswork is inappropriate. Ultimately, it is the special master's task to determine whether assertions in a particular case are more likely than not to be true. Here, the petitioner has fallen short of supplying preponderant evidence to support assertions that are essential to her claim.

A secondary (and intimately related) issue regards the testimony from Ms. Elson. Due to the absence of objective, contemporaneously created records, Ms. Elson has attempted to fill in the evidentiary gaps by providing testimony many years after the subject events took place. However, human memory is seldom perfect, and recall becomes less robust over time. To be sure, testamentary evidence is valuable and must be considered. However, a persistent problem with this case, revealed below in section III.A.4 and III.B. 3, and discussed in section IV, is that Ms. Elson's testimony has been inconsistent. Generally speaking, when a case participant asserts incongruous statements, fact-finders are justified in being skeptical of the accuracy of the speaker's statements. Camery v. Sec'y of Health & Hum. Servs., 42 Fed. Cl. 381, 391 (1998) (noting "testimony that is inconsistent with medical records must be consistent, clear, cogent and compelling to outweigh the medical records prepared for the purpose of diagnosis and treatment."); Caron v. Sec'y of Health & Hum. Servs., 136 Fed. Cl. 360, 377-78 (2018). Furthermore, when documents are lacking and inconsistent testimony permeates the record, fact-

finders have the unenviable chore of deciding between two (or more) versions of events.

A tertiary problem is that the experts have developed their opinions based upon the rough sketch that the limited record evidence provides. Clinicians and expert witnesses often work with incomplete pictures. They are tasked with developing hypotheses and theories about what happened, what is happening, and what will happen in the future. This necessarily involves making inferences and assumptions. Although the experts have provided theories about Mr. Hodge's life, they have built their versions of events upon shaky foundations.

Before considering the experts' theories, the special master must make findings of facts. The uncertainty involved in examining an incomplete record does not prevent a special master from making factual determinations on a more likely than not basis. In re Claims for Vaccine Injuries Resulting in Autism Spectrum Disorder or a Similar Neurodevelopmental Disorder, 2004 WL 1660351, at *8 (Fed. Cl. July 16, 2004) ("in legal factfinding, if there is no evidence, the factual issue simply is resolved against the party having the 'burden of proof.'").

However, doing so judiciously is challenging. To illustrate the difficult task, imagine an unfinished puzzle featuring lots of blue puzzle pieces with wisps of white. To some, it may appear to be a sky with clouds; to others, it looks like an ocean with sea foam. Occasional unconnected red pieces could be part of a plane or the side of a sailboat.

To build their cases, petitioners must preserve, produce, and present the puzzle pieces that paint their portrait. It is insufficient to build a blue border, depict disjointed red dots, and declare the puzzle represents a sky with an airplane – the petitioner must present preponderant evidence to persuade the special master that the puzzle is more likely than not what they claim it to be. In other words, the dots need to be connected and the border must persuasively resemble a sky and not an ocean.

The above issues are defining characteristics of this case. In the Vaccine Program, many cases succeed or fail based upon the contemporaneously created medical records. Unfortunately, for a multitude of reasons discussed below, records during critical timeframes do not exist in this case. Petitioners may still succeed even without stellar records. But, for the reasons detailed below, the testimony necessary to rescue petitioner's case is not persuasive enough to establish pertinent facts. Without a solid foundation of facts, much of the expert testimony becomes moot.

In this case, petitioner's expert, Dr. Carlo Tornatore, assumes that Mr. Hodge suffered from Lyme disease before Mr. Hodge developed OCD. However, petitioner has not established that predicate with preponderant evidence.

II. Case Overview

A. Procedural History

The duration of this case is unusual, and the recitation of events during its pendency is, accordingly, lengthy as well. For approximately six years, the parties focused on determining whether the case could proceed because the statute of limitations appeared to bar the claim. Part of this process, which is described in section II.A.1 below, involved the gathering of medical records. Eventually, the undersigned found that the doctrine of equitable tolling allowed the case to proceed.

The next stage concerned the development of opinions as to whether the 2006 vaccinations caused Mr. Hodge's OCD to worsen. As discussed in section II.A.2 below, this stage ended when an entitlement hearing was cancelled to allow Ms. Elson to obtain additional records about Mr. Hodge's health in 2005 and 2006.

Section II.A.3 below recounts some of the efforts to obtain this information. Ideally, all records about Mr. Hodge's health and well-being should have been gathered from schools, doctors, and counselors much closer to when the petition was filed in 2009, not a decade later. After these efforts ended and the experts reviewed the material, the case proceeded to an entitlement hearing on June 14-15, 2021. The parties then filed briefs, making the case ready for adjudication.

1. *Petition through December 21, 2015 Ruling Finding Equitable Tolling*[2]

Represented by Mr. Clifford Shoemaker, the petitioner filed the petition on July 15, 2009, alleging that Mr. Hodge suffered "various injuries" after receiving hepatitis A and hepatitis B vaccines in March and April of 2006. Pet. at 2, 5-6. In July 2009, the petitioner was identified as Jeremy Hodge, although whether Mr. Hodge engaged Mr. Shoemaker and whether he possessed the capacity to retain an attorney appeared unclear.

[2] The December 21, 2015 ruling regarding equitable tolling sets out the procedural history relevant to the statute of limitations and equitable tolling issues in more detail. 2015 WL 9685916.

Mr. Shoemaker stated that Mr. Hodge's mother (Ms. Elson) contacted Mr. Shoemaker less than 48 hours before Mr. Shoemaker filed the petition. Mr. Shoemaker was filing the petition as quickly as possible "to stop the running of the statute of limitations." Pet. ¶ 11. Mr. Shoemaker further explained that he possessed only two medical records: the vaccination record and the results of a May 19, 2009 MRI.[3] Id. Mr. Shoemaker filed those documents as exhibits 1 and 2 on November 3, 2009.

In the absence of other medical records, Mr. Shoemaker stated that Mr. Hodge "experienced various symptoms that will be described in subsequently filed affidavits from the Petitioner, his mother and perhaps other witnesses. Presumably, many of these symptoms will also be found in medical records." Pet. ¶ 6.

On behalf of petitioner, Mr. Shoemaker sought and received authorization to serve subpoenas to gather medical records. See Pet'r's Mot., filed July. 15, 2009; Order Granting Mot., issued Aug. 31, 2009. It is not readily apparent whether Mr. Shoemaker served subpoenas on Valley Care, the institution where Mr. Hodge was allegedly diagnosed with OCD, or Dr. John Nasse, a doctor who provided mental health services to Mr. Hodge. See Resp't's Post Hearing Br. at 32 n.20.

The petition acknowledged a potential statute of limitations problem. Pet. ¶ 7. In the initial status conference on September 3, 2009, the Secretary raised the statute of limitations problem and consistently reminded petitioner about this problem. Nevertheless, Mr. Shoemaker pressed forward on behalf of Mr. Hodge / Ms. Elson. Between November 2009 and January 2012, the petitioner filed medical records (exhibits 1-8, 10-12) and an affidavit from his mother (exhibit 9) in support of the claims, which are summarized below. Mr. Hodge did not submit an affidavit from himself.

After Mr. Hodge appeared to have filed most of the relevant medical records, the Secretary filed a Rule 4 report and motion to dismiss the petition on April 30, 2012. The Secretary identified some problems with the medical records that remain unresolved ten years later. For example:

- The psychologist or psychiatrist who prescribed Zoloft in March 2005 was not identified. Resp't's Rep. at 2, citing exhibit 3 at 4.

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[3] Although the record states the "D/T" (likely Date of Treatment) was May 18, 2009, the date of study is listed as May 19, 2009. The parties use the May 19, 2009 date. To avoid confusion, the undersigned will refer to this MRI as occurring on May 19, 2009. See exhibit 2 and exhibit 7 at 210-211.

- Dr. Rodriguez's handwritten notes from March 17, 2006 and June 8, 2006 were not entirely legible. Resp't's Rep. at 2 n.2, citing exhibit 5 at 2, and Resp't's Rep. at 4, citing exhibit 5 at 4.
- The psychologist or psychiatrist whom Mr. Hodge was seeing in April 2006 was not identified. Resp't's Rep. at 3, citing exhibit 5 at 3.
- A lack of clarity about the neurologist whose treatment in June 2006 displeased Ms. Elson. Resp't's Rep. at 4, citing exhibit 5 at 3.
- Any VAERS report that Dr. Rodriguez may have submitted in June 2006. Resp't's Rep. at 4, citing exhibit 5 at 4.[4]
- The person (possibly a psychiatrist) who prescribed Inositol that Mr. Hodge was taking in August 2006. Resp't's Rep. at 5, citing exhibit 4 at 15.

The Secretary additionally explained that this list related to the timeliness of filing the petition. The Secretary stated:

> The parties have discussed previously the incompleteness of petitioner's medical records. However, given the potential that this claim is untimely, and the possibility that petitioner may not be entitled to attorneys' fees and costs, respondent has attempted to limit any requests for additional records to those needed to determine whether petitioner's claim is timely. Respondent reserves the right, however, to request that petitioner provide complete records from all care providers for the relevant time periods both before and after his March and April, 2006 vaccinations.

Resp't's Rep. at 18 n.14.

Beyond identifying these deficiencies among the records Mr. Hodge had filed, the Secretary raised two arguments against compensation. First, the Secretary maintained that the petition was filed beyond the time permitted by the statute of limitations. Second and briefly, the Secretary contended that Mr. Hodge had not submitted evidence to show a vaccination caused any injury, and thus the Althen factors had not been satisfied. Id. at 17-20.

[4] In an affidavit filed in 2021, Ms. Elson stated that she never filed a VAERS report. Exhibit 86 at 25.

At the undersigned's direction, the Secretary formally requested medical records. Resp't's Status Rep., filed May 21, 2012. In response, Mr. Shoemaker stated that counsel was working with Mr. Hodge's mother, who would be sending counsel medical records and contact information. Pet'r's Status Rep., filed July 20, 2012.[5] Months later, no additional records had been filed. Mr. Shoemaker represented that he had not been able to speak with Ms. Elson because she was caring for Mr. Hodge. Mr. Shoemaker represented that he would send requests for records later that week. Pet'r's Status Rep., filed Oct. 25, 2012.[6]

Pursuant to an order, Mr. Hodge filed medical records on January 4, 2013. Exhibits 13-14. Mr. Shoemaker discussed the efforts to obtain more records, of which the most important concerned the diagnosis and treatment for Mr. Hodge's OCD. For this problem, Mr. Shoemaker seemed to be relying upon Ms. Elson's work:

> Counsel has spoken to the Petitioner's mother and she told Counsel that she was unsure of the name of the provider. She told Counsel that she drove by the building that the provider was at and they are no longer there. She said she would place a call into the County to see if the records exist anymore.

Pet'r's Status Rep., filed Jan. 31, 2013.

It appeared that despite some outstanding requests for records, Mr. Hodge may have produced medical records sufficient for him to respond to the Secretary's pending motion to dismiss due to untimeliness. The undersigned directed Mr. Hodge to obtain a report from an expert addressing three questions. These questions were: (1) what is a proper diagnosis for Mr. Hodge? (2) when did Mr.

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[5] Mr. Shoemaker's associate, Sabrina Knickelbein, signed these status reports on behalf of Mr. Shoemaker. See Rule 83.1(c)(2) of the Rules of the Court of Federal Claims (authorizing one member of the bar to sign for counsel of record).

[6] Medical records produced later showed that Mr. Hodge was in counseling with Dr. Dasher around this time. See exhibit 14.2 at 106.

Hodge begin to suffer from that disease? and (3) whether any additional treatment and/or testing is appropriate for Mr. Hodge? Order, issued April 24, 2013.[7]

Mr. Shoemaker filed a status report regarding outstanding medical records requests on May 6, 2013. Counsel reported that he spoke to Ms. Elson, reviewed the file, and she indicated that all of the records for Dr. Rodriguez had been filed, thus they would no longer pursue that request. Counsel also continued to seek records from Greg Nelson, a dermatologist.

On August 23, 2013, Mr. Hodge filed an export report from Dr. Tornatore. Exhibit 18. Dr. Tornatore opined that "the diagnosis of neuroborreliosis would not be unreasonable." Id. at 2. Furthermore, with the information available at that time, Dr. Tornatore opined that the medical records showed that the neuroborreliosis began in 2005. Id. at 2. Dr. Tornatore also stated that some of Mr. Hodge's reported symptoms (dizziness and eye movement disturbances on June 2, 2006), evidenced a worsening of his "underlying autoimmune demyelinating disorder." Id.

Although Dr. Tornatore's report filled some gaps in Mr. Hodge's evidence, Mr. Hodge had not responded to the legal arguments in the Secretary's motion to dismiss. The parties developed their legal arguments in briefs. See Pet'r's Memo, filed Jan. 30, 2014; Resp't's Resp., filed May 9, 2014; Pet'r's Sur-Reply, filed Oct. 1, 2014. With Mr. Hodge's Sur-Reply, he submitted an affidavit from Ms. Elson. Exhibit 19.

The undersigned granted the Secretary's motion to dismiss based upon two rulings. First, the undersigned determined that Mr. Hodge filed his petition after the statute of limitations elapsed. Second, the undersigned found that Mr. Hodge did not establish his mental illness justified equitable tolling. Decision, 2015 WL 1779274 (Mar. 23, 2015).

This decision, however, did not lead to a judgment. Mr. Hodge filed a motion for review. The Court vacated the aspect of the March 23, 2015 decision concerning equitable tolling and remanded for additional consideration. Opinion and Order, 123 Fed. Cl. 206 (2015).

On remand, the parties filed additional evidence regarding Mr. Hodge's mental capacity. See, e.g., exhibit 20 (records from Dr. Glenn Mathisen and Dr. Wendy Clough, contemplating potential problems Mr. Hodge might have been

[7] During the status conferences held to discuss the collection of medical records, the Secretary continued to question the reasonable basis for this claim. See orders dated June 27, 2013; April 24, 2013.

experiencing, including Lyme disease and other issues); exhibit 21 (affidavit from Ms. Elson); exhibit 22 (report of Robert Dasher, a psychologist who treated Mr. Hodge); exhibit A (report of Elizabeth LaRusso, a psychiatrist the Secretary retained); exhibit C (report of John Dunn, a neuropsychologist the Secretary retained). Mr. Hodge filed another affidavit from his mother, who challenged some factual assertions made by Dr. LaRusso and Dr. Dunn. Exhibit 26.

The undersigned found that Mr. Hodge qualified for equitable tolling. Ruling, 2015 WL 9685916 (Dec. 21, 2015). The undersigned held, as a matter of law, that the Vaccine Act authorized equitable tolling for mental illnesses.[8] The undersigned also held that to be entitled to equitable tolling, a claimant must establish that he is "incapable of handling his own affairs." Id. at *8, quoting Barrett v. Principi, 363 F.3d 1316, 1321 (Fed. Cir. 2004). Based upon the evidence, the undersigned found that Mr. Hodge's mental illness deprived him of the ability to handle his own affairs, justifying equitable tolling. Id. at *24. Finally, the undersigned suggested that the finding that Mr. Hodge could not handle his own affairs implied that Mr. Hodge should not be the petitioner in this case. Id. at *24.

2. *Development of Expert Opinions and Initial Scheduling of Entitlement Hearing*[9]

The December 21, 2015 ruling allowed the case to proceed. The first task was to resolve who should be the petitioner. Mr. Shoemaker stated that Ms. Elson intended to become the conservator for Mr. Hodge through the California Probate Court. Pet'r's Status Rep., filed Jan. 20, 2016. On October 4, 2016, Mr. Shoemaker filed an order appointing Ms. Elson conservator. Exhibit 28. Based upon this order, Mr. Shoemaker sought to amend the caption.[10]

Once the identity of the petitioner was resolved, the parties proceeded to develop evidence related to causation in earnest. An October 24, 2016 order structured the next steps. The Secretary suggested obtaining *updated* medical records and Mr. Shoemaker was agreeable. In retrospect, Mr. Shoemaker should

[8] The Federal Circuit later agreed with this holding. K.G. v. Sec'y of Health & Hum. Servs., 951 F.3d 1374, 1381 (Fed. Cir. 2020).

[9] The December 21, 2015 ruling regarding equitable tolling sets out the procedural history relevant to the statute of limitations and equitable tolling issues in more detail. 2015 WL 9685916.

[10] The caption was officially modified on November 9, 2016.

have done more to obtain records, such as school records and medical records, created before 2006 and around the time of the vaccinations in 2006. However, it appears that by 2016, all participants (including the undersigned) had failed to appreciate that the petitioner should gather more information about Mr. Hodge's health before and shortly after the vaccinations. In any event, Mr. Shoemaker wanted to obtain a report from Dr. Tornatore in which Dr. Tornatore could explain how the vaccinations significantly aggravated Mr. Hodge's pre-existing OCD. To further this process, the undersigned proposed a set of instructions for preparation of expert reports. Order, issued Oct. 24, 2016. These instructions directed the experts to present opinions regarding the expected course of OCD. Final Instructions, issued Nov. 22, 2016, ¶ 4.b.

The petitioner, now Ms. Elson, filed Dr. Tornatore's report on January 23, 2017. Exhibit 29. In presenting this report, Dr. Tornatore did not address the expected course of OCD. See id. The next day, Ms. Elson filed two more medical records. Exhibits 31-32. Ms. Elson added another set of medical records on February 17, 2017. Exhibit 33.

Ms. Elson filed an amended petition on March 6, 2017. The amended petition was short, barely more than one page. Based on Dr. Tornatore's report, the amended petition alleged that the 2006 vaccinations significantly aggravated Mr. Hodge's neuroborreliosis. Am. Pet., filed March 6, 2017, ¶ 6.[11]

Dr. Tornatore's report suggested that records from a psychiatrist or psychologist who treated Mr. Hodge might be necessary. Accordingly, Ms. Elson was directed to file a status report regarding records from a psychiatrist or psychologist. Order, issued Feb. 13, 2017. Ms. Elson, in turn, represented that the "petitioner has filed all of his psychiatrist and psychologist records." Pet'r's Status Rep., filed March 15, 2017.

In retrospect, again, the undersigned should not have accepted this two-sentence status report. The undersigned should have demanded that Ms. Elson and/or Mr. Shoemaker submit an affidavit describing efforts to obtain records from a psychiatrist and/or psychologist. See Vaccine Rule 2(c)(2)(B)(1); Guidelines, Section II, Chapter 3, paragraph B.13. However, the undersigned accepted the representation of Mr. Shoemaker.

[11] Around this time, the undersigned awarded attorneys' fees and costs on an interim basis. Interim Fees Decision, 2017 WL 1315716 (March 9, 2017). The undersigned issued a second decision awarding interim attorneys' fees and costs on May 3, 2017. Second Interim Fees Decision, 2017 WL 2333626 (May 3, 2017).

On August 4, 2017, the Secretary responded to Dr. Tornatore's report by submitting a report from Arun Venkatesan. Exhibit E. Dr. Venkatesan opined that the course of OCD waxes and wanes. Thus, any worsening of Mr. Hodge's OCD after the 2006 vaccinations reflects a natural course of OCD, which he opined was not caused by the vaccinations.

This case was then scheduled for a one-day hearing on November 5, 2018. Order, issued Sept. 21, 2017. This order encouraged Ms. Elson to attend the hearing.

On December 18, 2017, Ms. Elson filed a supplemental report from Dr. Tornatore, which was approximately two pages. Exhibit 34. Dr. Tornatore did not address topics listed in the August 9, 2017 order, such as the expected course of OCD. Accordingly, Ms. Elson was barred from introducing testimony from Dr. Tornatore about these topics in the forthcoming hearing. Order, issued Dec. 22, 2017.

In anticipation of the November 5, 2018 hearing, the undersigned directed the parties to file briefs and other material, such as updated medical records. Order, issued March 23, 2018. This order again encouraged Ms. Elson's participation in the hearing. Id. at 10 n.6. The March 23, 2018 order referenced the December 22, 2017 order limiting Dr. Tornatore's testimony.

After being reminded about the December 22, 2017 order, Ms. Elson sought reconsideration of the order restricting Dr. Tornatore's testimony to the topics on which he had opined. Pet'r's Mot. filed April 30, 2018. With her motion, Ms. Elson submitted another report from Dr. Tornatore. Exhibit 35. The Secretary stated that he would not be prejudiced by consideration of this report. Resp't's Resp., filed June 13, 2018. In the absence of an objection from the Secretary, Dr. Tornatore's April 30, 2018 report was accepted. Order, issued June 19, 2018.

After receiving enlargements of time, Ms. Elson filed her brief on June 28, 2018. Before and in conjunction with this submission, Ms. Elson also filed medical records and medical articles. The Secretary filed his brief on August 15, 2018.

Based upon the parties' arguments, a lengthy and substantive status conference was held on September 7, 2018. The undersigned advised that the hearing should be extended from one day to two days. Based upon the availability of the attorneys, Dr. Tornatore, and Dr. Venkatesan, the hearing was rescheduled for January 10-11, 2019. Order, issued Sep. 17, 2018.

In the September 7, 2018 status conference, the undersigned also suggested that Ms. Elson should testify. Mr. Shoemaker represented that rather than testifying orally at a hearing, Ms. Elson could present a comprehensive affidavit. In addition, the undersigned ordered Ms. Elson to file a series of documents, including Mr. Hodge's school records, a list of payments from any insurance company, and records from Dr. Nasse. Order, issued Sept. 7, 2018. To ensure that Ms. Elson's affidavit was comprehensive, the undersigned propounded a series of questions for her to answer. Order, issued Sept. 13, 2018; see also 42 U.S.C. § 300aa–12(d)(3)(B)(iii) (authorizing special master to require the testimony of any person).

Ms. Elson began to submit additional documents. The collection of school records, unfortunately, contained relatively little useful information because the school systems did not retain all records. See exhibits 58, 60-61. Attempts to obtain medical records were also sometimes unsuccessful. See exhibits 62, 64. One notable example of a missing records were records from the doctor who provided mental counseling to Mr. Hodge, Dr. Nasse. Exhibit 70.

Ms. Elson requested additional time to file her comprehensive affidavit. See Pet'r's Mot., filed Oct. 9, 2018; Pet'r's Mot., filed Oct. 22, 2018; Pet'r's Mot., filed Nov. 6, 2018. Ms. Elson finally submitted her comprehensive affidavit on November 26, 2018. Exhibit 71. This affidavit generally did not answer many questions put forth in the September 13, 2018 order.

Although the undersigned had anticipated that Dr. Tornatore and Dr. Venkatesan would review any additional documents and present supplemental reports before the hearing starting on January 10, 2019 (see order, issued Oct. 24, 2018), this task was not possible. Ms. Elson had not collected many documents. For example, Ms. Elson had not obtained documents from the insurance company showing a list of payments to doctors who had treated Mr. Hodge. See Pet'r's Mot. for Subpoena, filed Oct. 26, 2018. This list could have identified doctors whom Ms. Elson did not recall. Without a complete set of documents describing Mr. Hodge's condition before and around the time of his vaccinations in 2006, the undersigned reluctantly cancelled the hearing. Order, issued Nov. 28, 2018.

3. Attempts to Gather More Factual Materials Through Entitlement Hearing

After the hearing was cancelled, Mr. Shoemaker intensified efforts to obtain medical records. Mr. Shoemaker submitted motions to authorize him to subpoena various institutions that possessed either medical records or school records for Mr. Hodge. This process garnered little useful information. See, e.g., exhibit 72.

Efforts to obtain information from the insurance company that paid for Mr. Hodge's medical care were especially protracted. Repeatedly, Mr. Shoemaker seemed to be close to receiving useful information only to learn later that his request was misdirected. See, e.g., Pet'r's Status Rep., filed July 12, 2019.

Mr. Shoemaker was replaced as Ms. Elson's counsel of record by Renee Gentry on October 30, 2019. Ms. Gentry continued to represent Ms. Elson and continued the process of attempting to gather information from an insurance company about payments to doctors. See Pet'r's Status Rep., filed Jan. 6, 2020.

The persistence of Mr. Shoemaker and Ms. Gentry eventually led to a list of medical providers. Ms. Gentry filed a list on February 27, 2020 as exhibit 80. From this list, Ms. Gentry intended to seek additional records. However, by this time, the coronavirus pandemic had caused delays in obtaining records from medical facilities. Eventually, some potential sources of information responded that they did not have information. See exhibit 82.

The parties determined that by August 2020, Ms. Gentry and Ms. Elson had exhausted all possible sources of written information about Mr. Hodge. Thus, the parties were directed to provide the material that Mr. Shoemaker and Ms. Gentry had discovered to the experts the parties had retained. Order, issued Aug. 25, 2020.

The recently produced material did not affect the opinions of either Dr. Tornatore or Dr. Venkatesan. Dr. Tornatore took the opportunity to restate his opinions and to reorganize his presentation in a comprehensive report. Exhibit 83. Dr. Venkatesan wrote four sentences. Exhibit I.

The undersigned, again, attempted to mark the case down for a hearing. As a preliminary step, Ms. Elson was to determine whether she would testify at a hearing because her participation would influence the duration of the hearing. Order, issued Nov. 12, 2020. Ms. Elson stated that she did not want to testify live. Instead, she wanted to file an updated affidavit. Pet'r's Status Rep., filed Dec. 14, 2020.

Ms. Elson's request to submit an affidavit was granted. However, the undersigned noted that Ms. Elson had not responded to the questions posed to her in the September 13, 2018 order. Answering those questions could be important. In addition, information about Mr. Hodge's functioning in the years since Ms. Elson's previous affidavit would not be likely to affect whether the vaccinations in 2006 harmed Mr. Hodge. Order, issued Dec. 23, 2020.

The December 23, 2020 order also set out deadlines for scheduling a two-day hearing as well as the submission of briefs before the hearing. A mutually convenient time for a hearing was found to be June 14-15, 2021. Thus, a hearing was ordered for those dates. Order, issued Jan. 22, 2021.

Ms. Elson filed her affidavit on February 3, 2021. Exhibit 86. Ms. Elson appeared to make a good-faith effort to answer all the questions set forth in the September 13, 2018 order, although she did not address all questions entirely. Ms. Elson's affidavit was considered, and its contents are set forth in the recitation of evidence below. Ms. Elson submitted her brief on February 24, 2021.

Following the submission of Ms. Elson's affidavit and her brief, the undersigned issued a series of orders to clarify the record. For example, Ms. Gentry drafted and filed two affidavits regarding how medical records were collected. Exhibits 87-88. The Secretary declined to explore settlement. Resp't's Status Rep., filed March 24, 2021. The same day, the Secretary filed his brief, arguing Ms. Elson was not entitled to compensation. Ms. Elson addressed some of those arguments. Pet'r's Reply, filed April 26, 2021.

In his brief, the Secretary requested that Ms. Elson testified orally at the upcoming hearing. Resp't's Pre-Hearing Br. at 43. In response, Ms. Elson stated that she "will make herself available to testify should the Court require it[,]" although Ms. Elson questioned whether her testimony in 2021 could add to what she had stated in her affidavits and what is contained in the medical records. Pet'r's Status Rep., filed April 1, 2021. Based upon the lack of objection from Ms. Elson as well as the undersigned's previously expressed interest in obtaining testimony from Ms. Elson, the undersigned scheduled time for Ms. Elson to testify. Order, issued April 15, 2021.

On June 14 and 15, 2021, a hearing was held. Ms. Elson testified at the hearing, as did Dr. Tornatore and Dr. Venkatesan. On June 17, 2021, the parties were ordered to file post-hearing briefs.

Ms. Elson filed her post-hearing brief on September 20, 2021. Respondent filed his post-hearing brief on December 3, 2021. On February 1, 2022, Ms. Elson submitted a reply brief.

On February 10, 2022, to address remaining issues and clarify the parties' positions on several matters, the undersigned scheduled an oral argument and provided a list of questions for the parties to prepare to address. The oral argument was held on March 17, 2022. At this point, it was evident the parties had exhaustively stated their positions and that no more evidence would be uncovered to fill in the gaps.

B. A Brief Summary of the Parties' Positions

This section contains a condensed recitation of the parties' positions, highlighting the major points of contention between the parties. The position statements below are derived from the post-hearing briefs. A more comprehensive explanation of the evidence and arguments follows in subsequent sections.

1. Petitioner's Position

According to Ms. Elson, her attorneys, and Dr. Tornatore, the facts of this case are as follows. Mr. Hodge was healthy and happy prior to 2003. See, e.g., Pet'r's Post Hearing Br., at 4. Mr. Hodge was 15-16 years old during that year. At some point in 2003, during a camping trip, Mr. Hodge was bitten by a tick carrying *Borrelia Burgdorferi*, the pathogenic spirochete (spiral-shaped bacteria) which can cause Lyme disease and neuroborreliosis (a *Borrelia* infection of the central nervous system with neurologic manifestations).[12] Id. at 4, 8, 48. As such, Mr. Hodge developed Lyme disease. Subsequently, the Lyme disease progressed to neuroborreliosis and caused Mr. Hodge to develop OCD. Id. at 4-5. Despite the Lyme disease and Lyme-induced OCD, Mr. Hodge lived a mostly normal life. Id. at 5. Difficulties with OCD were manageable.

On March 17, 2006, Mr. Hodge received the hepatitis A and B vaccines. Symptoms suggestive of an adverse reaction followed, including fatigue, stabbing pains, and uncontrollable eye movements. Id. at 6. Mr. Hodge returned to the same clinic to receive a hepatitis B booster vaccine on April 25, 2006. After the second shot, "[a]ll hell broke loose." Id. (quoting Ms. Elson, Tr. at 150). A host of problems followed, indicating his psychiatric symptoms had been significantly aggravated. See, e.g., Pet'r's Post Hearing Br. at 6-7, 17, 23, 26. He went to emergency rooms multiple times in 2006, indicating a radical change in his health. Id. at 9-11. He continued to seek treatment, though he had less encounters with medical professionals in 2007 and 2008. Id. at 11-12.

In 2009, Mr. Hodge received MRIs of his brain that indicated the presence of a demyelinating condition. Id. at 12. Bloodwork performed in 2009 also indicated he had Lyme disease. Id. at 13. Mr. Hodge had many hospital visits in 2009 that elucidated underlying heath concerns. Id. at 13-15. Mr. Hodge and his mother continued to see doctors between 2010 and 2016 seeking clarification and

[12] In the parties' briefs and in some medical records, the phrase "neurolyme" is occasionally used. It seems this term is being used interchangeably with "neuroborreliosis."

treatment. Id. at 15-16. Ms. Elson became Mr. Hodge's conservator in 2016. Id. at 18.

In sum, Mr. Hodge developed Lyme-induced OCD in 2003, which was manageable until the 2006 hepatitis B vaccinations significantly aggravated his underlying condition. Id. at 17-18.

2. Respondent's Responses

The Secretary disputes many aspects of Ms. Elson's version of events, as well as the sufficiency and reliability of the evidence proffered. The Secretary argues petitioner has not shown the subject vaccinations can or did cause a significant aggravation of neuroborreliosis. Resp't's Post Hearing Br. at 5. This aspect of the Secretary's position concerns the medical theories that correspond to the Althen prongs. Id. at 53-66.

Fact issues are also raised. The Secretary argues that the evidence does not support findings that (a) Mr. Hodge suffered neuroborreliosis prior to the 2006 vaccinations, (b) Mr. Hodge suffered vaccine-induced demyelination, or (c) Mr. Hodge's condition was significantly aggravated by the vaccines. Id. at 5-6, 31-53. Other fact discrepancies are addressed as well. The Secretary notes the petitioner's burden to produce records supporting her claims. Id. at 26-28.

In the Secretary's view, Mr. Hodge's condition after the vaccines is consistent with the natural course of OCD.[13] Id. at 6. But, the Secretary also argues the burden of proof has not shifted to him because the petitioner has not presented a *prima facie* case. Id. at 66-67.

In sum, the Secretary disputes nearly all aspects of petitioner's position. The factual evidence is insufficient and unreliable; the medical theories are not well supported; and in the alternative, the series of events is better explained by the natural course of Mr. Hodge's pre-existing condition.

III. Recitation of Evidence

As discussed above, the evidence in this case is less than ideal. The peculiar circumstances compel a particular presentation; a chronological discussion is more

[13] The Secretary argues "[w]hile is unknown when Mr. Hodge may have contracted Lyme disease, no neurological manifestations occurred for at least three years after his 2006 vaccinations." Resp't's Post Hearing Br. at 43. The Secretary's expert witness, Dr. Venkatesan, opined that Mr. Hodge likely had neuroborreliosis in 2009, and the Secretary argues that the medical records do not support that diagnosis prior to 2009. Id. at 48; Tr. at 442-43.

complicating than clarifying under the conditions of this case. Much of the evidence regarding what may have happened in a given year is derived from testimony provided years later. For example, there are no records created in 2003 that illuminate the events of that year, but plenty of testimony has been generated discussing what may have happened in 2003.

If this evidence had been reliable, consistent, and developed in a timely fashion, the undersigned would have presented the evidence in a chronological order. However, under these circumstances, the evidence is recited and evaluated based upon the source from which it was derived. Contemporaneously created medical records receive a rebuttable presumption of validity. In contrast, although testamentary evidence must be considered, it does not receive the same presumption of validity. Curcuras v. Sec'y of Health & Hum. Servs., 993 F.2d 1525, 1528 (Fed. Cir. 1993). Furthermore, special masters are not required to accept party assertions as facts, particularly when there is reason to doubt the veracity of a given claim.

During the course of litigation, Ms. Elson was involved in creating numerous affidavits. At a macro level, they tell a similar story. However, there are significant inconsistencies regarding several facts. For reference, Ms. Elson's affidavits are listed below.

Exhibit Number	Filing Date	ECF #
Exhibit 9	January 14, 2011	33
Exhibit 19	October 1, 2014	97
Exhibit 21	October 16, 2015	124
Exhibit 26	December 4, 2015	135
Exhibit 71	November 26, 2018	245
Exhibit 86	February 3, 2021	335

An additional problem is that the parties' briefs make statements contradicted by the records that they rely upon. See, e.g., footnotes 36 and 39. Due to these problems, the undersigned has spent additional time independently reviewing all evidence to understand Mr. Hodge's health during critical times.

The evidence below is divided into events before the subject vaccinations and events contemporaneous with and after the vaccinations. Sections III.A and III.B. Within these categories, evidence gleaned from medical and school records merit their own sub-sections. Next, testamentary evidence is summarized, which at times corroborates, contradicts, and compliments the medical records. The subsequent section concerns expert commentary, which necessarily relies on the

facts and assertions from the preceding sections. After the recitation of evidence, findings of facts are reached in Section IV.[14]

A. Mr. Hodge's Health and Condition(s) Before the 2006 Vaccinations

The following section concerns Mr. Hodge's health prior to the 2006 vaccinations. Information is derived from (1) medical records; (2) school records; (3) statements and evidence regarding missing and unavailable records; (4) testimony, including affidavits and oral statements; and (5) expert commentary.

1. Medical Records

Jeremy Hodge was born on May 15, 1987. Exhibit 3.1 at pdf 4. The medical records from Mr. Hodge's pediatrician, Dr. Lawrence Menzer, recount relatively routine illnesses associated with childhood. See exhibit 3.1 and 3.2, passim.[15] Mr. Hodge received routine childhood immunizations in the late 1980s and early 1990s. Exhibit 3.1 at pdf 4; exhibit 1.

Though the handwritten descriptions are difficult to read, each entry is clearly stamped with a date of the visit. Mr. Hodge's parents regularly took him to Dr. Menzer's office. These include more than 10 visits in 1987, more than 10 visits in 1988, about 5 visits in 1989, about 4 visits in 1990, about 3 visits in 1991, about 5 visits in 1992, about 4 visits in 1993, and at least 1 visit each in 1994, 1995, and 1996. Exhibit 3.1, passim. Some words and phrases are legible, such as "sick," "fever," "cough," "stuffy nose," "viral syndrome," "bad cold," "tongue hurts."

It appears Dr. Menzer referred Mr. Hodge to Dr. Greg Nelson, a dermatologist, in 1996, when Mr. Hodge was 9 years old. A letter dated July 18,

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[14] However, out of necessity, some fact-finding occurs within each section. For example, the undersigned states his interpretations of difficult to decipher handwritten medical records, blurring the line between reciting evidence and finding facts about the content of the evidence.

[15] Unfortunately, much of Dr. Menzer's notes are handwritten. The parties and the undersigned have struggled to decipher the content. See, e.g., Pet'r's Pre-Hearing Br., filed June 28, 2018 (summarizing events between 2004 and 2006 with one sentence); Resp't's Rep., filed Apr. 30, 2012, at 2 (skipping over content in recitation of facts). Some information is readily intelligible; other content is unlikely to ever be decoded. This is one among many examples of suboptimal records.

1996 states Mr. Hodge was evaluated three days prior by Dr. Nelson. The letter states: "Jeremy was bothered by a rash on the bottom of his feet that has been present for several years. The mother feels that the use of his high topped shoes has aggravated this. In reality, this rash, although prominent is entirely asymptomatic." Exhibit 3.2 at pdf 5; exhibit 15 (duplicate of Dr. Nelson's note). The dermatologist's impression was granuloma annulare, and Mr. Hodge was given an ointment for treatment.[16]

As explained in the introduction and elsewhere in this decision, an unfortunate issue in this case is the absence of medical records and other notes describing contemporaneous events. There are no *available* doctors' notes or other records between July 1996 and March 2004 that document Mr. Hodge's health. See also Resp't's Post Hearing Br. at 6 n.4 (arguing Mr. Hodge was seen by other care providers during this period, despite the lack of available records). This eight-year gap makes it difficult to understand Mr. Hodge's health before the 2006 vaccinations. As discussed below, 2003 is an important year in the context of this litigation. However, the testimony utilized to fill this gap is unreliable. See supra section IV.

After the gap, some medical records exist that elucidate Mr. Hodge's health when he was 17 years old. The difficult to decipher handwritten notes from Dr. Menzer indicate that on March 10, 2004, Mr. Hodge was evaluated for "sinus pressure x 2 mo."[17] Exhibit 3.1 at pdf 5. It seems a diagnosis of nasal allergies was probably written. The subsequent note on the page suggests Mr. Hodge returned on April 19, 2004; it appears sinus pressure and nasal discharge are discussed, and amoxicillin may have been prescribed, but the rest of the note is incomprehensible. Id. The next recorded date is September 7, 2004, which seems to read: "Per mom would like Rx for Zyrtec – D, called in Rx: 0/1 tab PO 1-2 times/day #30." Id.

The next line in Dr. Menzer's notes is dated September 28, 2004. It appears to state: "Per mom was given Amox 500 mg near the weekend by Dr. on call –

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[16] The Secretary stated granuloma annulare is a chronic skin disease that manifests as a rash with reddish bumps arranged in a circle or ring, that is sometimes itchy and occasionally associated with diabetes and thyroid disease. Resp't's Rep. at 2 n.1. This assertion was not discussed by the experts subsequently retained to opine in this case.

[17] The rest of the note is too difficult to decode. See infra n.15.

sinus inf. – doing better per mom. Also mom said he was put on Adderall per psych. Advised px will call back to schedule yp." Records from the Ojai Village Pharmacy suggest Dr. Nasse prescribed Risperdal on September 27, 2004, and Adderall on September 28, 2004. See exhibit 23.[18]

Dr. Menzer's notes continue with the next visit on March 21, 2005. Only a portion of this note is legible. It appears to state: "sore throat, jaw pain, now stomach pains. Was taking Zoloft, now off last 2 days . . ." Exhibit 3.1 at pdf 6. Dr. Menzer appears to have written much during this visit, but neither parties' brief successfully deciphers the difficult to read text. This note also marks the end of Mr. Hodge's records from Dr. Menzer's office. The next medical record is on March 17, 2006, the date of the first hepatitis B vaccination. That medical record and subsequent medical records are discussed below in section III.B.1.

2. School Records

Information about Mr. Hodge's schooling was sparse due to when Ms. Elson collected those records. Ms. Elson attempts to fill the gaps via testimony, discussed below in section III.A.4 and III.B.3.

Mr. Hodge attended various schools throughout his childhood. Some of the records have been produced, others have been destroyed or are no longer available. See supra section III.A.3. The available and legible school records from before the 2006 vaccinations are recited below.[19]

Little information exists about Mr. Hodge's education and functioning during K-5. See exhibit 58. He attended Herrick Elementary School for kindergarten through second grade. Id. at pdf 4. One early school record stated that in second grade, Mr. Hodge's skills were below grade level. Exhibit 61 at 3. But, this notation is relatively isolated as only a few school records include grades

[18] The specific reason for Adderall was not given in the pediatrician's record or the pharmacy record.

[19] The school records that were discovered and provided have some problems. Like many of the medical records, they are difficult to read due to handwritten notes, smudging, and suboptimal copying quality. Additionally, they are incomplete: some years have available grades, most years do not have grades. Thus, using grades as a proxy for Mr. Hodge's functioning and/or mental health is difficult.

or teachers' comments.[20] He attended Knollwood School for third through fifth grade. Exhibit 58 at 4. No further information is available.

Some of the school records from the Los Angeles Unified School District were provided. See exhibit 61. Starting when he was in sixth grade (1999-2000), Mr. Hodge changed schools frequently. See also exhibit 74 (records supplied by Ventura Unified School District); exhibit 76 (some duplicates provided by Los Angeles Unified School District).

For sixth grade, Mr. Hodge attended two schools. The first was Voyager Charter School and the second was Homestead School. At both schools, his grades were all "P's" for passing. Exhibit 61 at pdf 9.

In seventh grade, Mr. Hodge started at City of Angels School. For the first semester, he earned three A's, one B, and one C, and one grade that cannot be read with certainty. Exhibit 61 at pdf 6. The records indicate he did not finish the second semester at this institution.[21] Although an affidavit fills in some of the gaps and is discussed below, no other records existed discussing eighth grade.

In ninth grade (2003-2004), Mr. Hodge again attended the City of Angels School. Exhibit 61 at pdf 7. He received all A's and one B. Id. Mr. Hodge would have been 16-17 years old during ninth grade.

School records do not exist regarding Mr. Hodge's schooling between tenth and twelfth grade. Information about his education during those years is provided via affidavits from Ms. Elson and is discussed below.

3. Unavailable Records / Unsuccessful Records Requests

Ms. Elson and her attorneys attempted to get records to fill in the gaps at various points. Unfortunately, not all attempts were successful. As such, some alleged events do not have any corroborating contemporaneous records. In the fall of 2018, Mr. Hodge's attorney attempted to get several records that either did not exist or no longer existed. The unavailable records regarding events prior to 2006 are recounted below.

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[20] Furthermore, this record is difficult to read.

[21] An affidavit, discussed below in section III.A.4, revealed that Mr. Hodge did an independent study program through Somis Union School District. No records were available from that institution. Exhibit 71 at 1-2; see also exhibit 60; Tr. at 165.

One example was school records, including transcripts and IEP documents, from Nordhoff High School. Exhibit 60. The school's registrar stated she was unable to locate records of Jeremy Hodge and could not confirm that he was a student at Nordhoff High School. Id. The registrar stated that the school retained transcripts and IEPs of any students within the Ojai Unified School district (with the exception of Chaparral High School) and that all records would have been retained with no intention of destruction. Id. If other school records existed, they were destroyed. See exhibit 77.

Mr. Hodge's attorneys also requested records from John Nasse, the doctor that prescribed Adderall to Mr. Hodge. In a handwritten note, Dr. Nasse certified that Mr. Hodge was his patient "on + off for a year between 2000 [and] 2003". See exhibit 70. Dr. Nasse wrote Mr. Hodge "was being treated for 'OCD'". Id. However, Dr. Nasse claimed the records were destroyed a couple years before the records request. Id.

Records for a facility called "Valley Care" were never discovered or filed. See exhibit 72, exhibit 88. Valley Care is where Mr. Hodge allegedly was first diagnosed and treated for OCD.

Notably, there are no medical records provided from 2003.

4. Testimony

The following section is divided into two subparts. First, events from before 2006 are extracted from the six affidavits Ms. Elson submitted. Next, Ms. Elson's oral testimony given during the hearing about details from before 2006 is summarized.

a) Ms. Elson's Affidavits[22]

The affidavits describe events before 2006, contemporaneous with the vaccines, and events after 2006. As previously discussed, this section (III.A.4.a) only recounts the content describing events before Mr. Hodge was vaccinated in 2006.

(i) Affidavit # 1 (exhibit 9)

Ms. Elson submitted her first affidavit on January 14, 2011. See exhibit 9. This date is approximate 2.5 years after the petition was filed. She recounts that Mr. Hodge "was at all times before his vaccination, extremely healthy." Id. at pdf

[22] Ms. Elson was the only percipient witness to submit affidavits. Mr. Hodge did not submit any affidavits.

3. She notes allergies, symptoms of sinus congestion, clogging, and headaches. Id. Ms. Elson sought allergy testing and medication to help with his symptoms. Id. at pdf 3-4. She recounts that Dr. Rodriguez prescribed Nasonex and Amoxicillin.

Notably, this initial affidavit makes no mention of OCD or ritualized behaviors. It generally portrays Mr. Hodge as completely healthy prior to the 2006 vaccinations.

(ii) Affidavit #2 (exhibit 19)

Ms. Elson submitted her next affidavit on October 1, 2014. In this filing, more details are alleged about Mr. Hodge's health prior to 2006. The affidavit begins: "While we do not know the exact trip where Jeremey likely contracted Lyme disease, we would go camping all the time at Big Sur, near my grandparents' house. . . . On our last trip there was a large amount of ticks everywhere." Exhibit 19 at 1. She recounts that there were "always ticks on the pets, and there were lots of deer and there were ticks on everything." Id. She recalls that Mr. Hodge had a bull's-eye rash on his leg at the end of the (unspecified) trip.[23] She alleged "[w]ithin a year of that he began exhibiting OCD hoarder symptoms and complained of spaciness and fogginess in his brain." Id.[24]

Although this affidavit maintains Mr. Hodge was active and participating in normal childhood activities (hiking, riding bikes, swimming, playing video games), it implicitly acknowledges he was not perfectly healthy. In contrast with the prior affidavit, this filing alleged Mr. Hodge developed Lyme disease, had "OCD hoarder symptoms" and was experiencing brain fog before the vaccinations.

(iii) Affidavit #3 (exhibit 21)

In the next affidavit, filed on October 16, 2015, Ms. Elson alleged more details about her son's health pre-vaccination. Petitioner prevailed on a motion for review, and at the time of this affidavit's filing, Ms. Elson was trying to support a finding in favor of equitable tolling.

She stated: "Jeremy's OCD developed around age 16. Before about May 2006, my son acted on his OCD symptoms but he could participate in his life."

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[23] This affidavit does not state in what year or at what age Mr. Hodge allegedly developed the rash and/or Lyme disease.

[24] Similarly, the affidavit does not state in what year or at what age Mr. Hodge allegedly began experiencing OCD symptoms.

Exhibit 21 at pdf 3. She noted the same hobbies as in the prior affidavit. In this affidavit, Ms. Elson adds:

> Before the vaccine he engaged in various rituals; he avoided walking in circles—circles were bad. He avoided certain numbers—numbers were scary. He walked up and down the stairs numerous times until 'he felt like he had done it the right number.' He chanted words in certain rituals and patterns. Jeremy turned the TV on and off; on and off; on and off. Same with the stove—he would turn it on and off; on and off in these rituals. His feelings told him the appropriate number of turns, of clicks, of trips he needed to take up and down the stairs. Although Jeremy struggled with OCD he didn't hallucinate like he did after the vaccine. His habits were pure obsessions where he had to perform his rituals in the appropriate numbers but his OCD did not consume his life.

Id. Ms. Elson continues by discussing Mr. Hodge toward the end of 2005. She stated that he was on track to get his GED at that time, but he could not attend school with the rest of his peers and instead took classes through an independent study program. Id. She further alleged that due to "his condition, ordinary high school overwhelmed him." Id.

(iv) Affidavit #4 (exhibit 26)

This affidavit (filed December 4, 2015) is not relevant for this portion of the decision.

(v) Affidavit #5 (exhibit 71)

Ms. Elson filed another affidavit on November 26, 2018. See exhibit 71. This affidavit provides more details and includes references to exhibits.

She fills in some details about which schools Mr. Hodge attended between kindergarten and sixth grade. Id. at 1. She notes that they moved to Ventura when Mr. Hodge was in seventh grade, and Mr. Hodge attended two schools that year: City of Angels Junior High and then an independent study through Somis Union School District.[25] Ms. Elson acknowledged that records supporting this assertion do not exist. Id. at 1-2; see exhibit 60. She stated he did independent study at the

[25] Based on the information provided, the move and seventh grade would have been between fall 2000 and spring 2001.

Homestead School for eighth grade. Exhibit 71 at 2. She stated he attended ninth grade at the City of Angels school. Id.

Ms. Elson recalled that on April 30, 2003, they moved to Canoga Park and the two lived there subsequently. She stated: "I don't remember when Jeremy had the tick bite that resulted in the bull's-eye rash on his leg, but I think it was shortly before we moved to [Canoga Park]. It was some time after the move when he started having OCD symptoms." Id at 2.

Ms. Elson next states that she took Jeremey to Valley Care, where he was prescribed Prozac and then Zoloft, and was seen by treaters there on and off for about six months. Id. She stated he had OCD symptoms, but they did not interfere with his daily life.

Jeremey continued at City of Angels for tenth grade and received good grades. Id.; see also exhibit 61. Ms. Elson states "Clearly, Jeremy's OCD was not causing any problems with his school work." Exhibit 71 at 2. She notes that she took Jeremy to Dr. Menzer in March of 2004 for sinus pressure. Id.; see infra section III.A.1.

Ms. Elson states Mr. Hodge did independent studies throughout the school district for eleventh grade, differentiating this from home schooling. She recalls that he reported to a facility called Opportunities for Learning on Ventura Boulevard in Encino. Id. However, "Jeremy decided to drop out of high school and work on getting his GED[.]" Id.

Ms. Elson states that on March 17, 2006 (the date of the first hepatitis vaccination), Jeremey "did have OCD, and he was somewhat depressed, but he was active and enjoying" previously discussed activities." Id. at 3. She compared him to the character from the TV series Monk, stating he had OCD but could live his life. Id.

(vi) Affidavit #6 (exhibit 86)

The final affidavit was filed on February 3, 2021. This lengthy affidavit featured specific questions posed by the undersigned. Though a majority of the questions were answered, at times the responses to multiple questions were condensed into a single response.

Ms. Elson testified that she generally relied on her memory when creating the prior affidavits, but also referred to some exhibits. Exhibit 86 at 1.

She discussed her family health history. Exhibit 86 at 2-5. She stated that her husband had head injuries, resulting in personality change. The two separated when Jeremy was 16; Ms. Elson and Jeremy moved away around 2003. Id. at 4-5.

Ms. Elson was asked questions regarding her employment. See id. at 5-6. She recalled working on and off, waitressing, working in movie theatres, and modeling before Jeremy was born. Id. at 5. Ms. Elson could not recall the specifics of the odd jobs she worked between 2004 and 2009. Id. at 6.[26] She discussed the activities she enjoyed. Id. at 6-7.

Next, Mr. Hodge's schooling was recounted. Id. at 7-9. Ms. Elson listed the schools he attended for K-5. Id. at 7-8. She affirmed he went to Voyager Charter School and the Homestead School for sixth grade, which he completed in June of 2000. Id. at 8. Next, he attended City of Angles Junior High and did independent study through Somis Union School District for seventh grade. Id. For eighth, he did independent study again at Homestead. He returned to City of Angels for ninth and tenth grade. Eleventh grade involved independent study through the school district and Opportunities for Learning in Encino. Id.[27]

The next portion of the affidavit concerned Mr. Hodge's activities and interests. Id. 9-10. Ms. Elson recounted Mr. Hodge enjoyed hiking, riding bikes, numerous sports, WWE wrestling events, and playing video games with friends. He enjoyed being outdoors. He performed one or more of these activities almost every day. Id. at 10.

The following section of the affidavit involves questions about Mr. Hodge's health between 2003 and March 17, 2006. Id. at 10-13. Ms. Elson recounts that during this period, he did not have any problems related to his sense of touch, he did not have excessive or unusually frequent headaches. Id. at 10. He slept easily and did not have problems walking. Id. at 11. When asked if professionals other than Dr. Menzer provided Jeremy any medical care, Ms. Elson wrote: "I can't remember. He may have seen professionals for OCD, perhaps Dr. Nasse." Id.

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[26] In response to the question of where she was employed, she wrote: "I don't remember specifics. It was a long time ago." She also could not recall her earnings or identify any work colleagues, co-workers, or supervisors. These responses call into question Ms. Elson's ability to recall other specific details during that timeframe.

[27] Some school records were obtained and filed, as noted in the affidavit. See exhibit 58 and exhibit 61. Good grades were noted in tenth grade. Exhibit 61 at 7. Other records were found to be unavailable. See infra section III.A.3.

She assessed Dr. Menzer as a good doctor. She recalled that Dr. Nasse prescribed the Adderall in 2004, and stated she did not give the medication to Jeremy as prescribed. Id. at 12.

She stated Mr. Hodge was first diagnosed with OCD at Valley Care and his symptoms started sometime after their move on April 30, 2003. Id. at 12-13. She reported the OCD was apparent due to his various rituals. Id. at 13. In this affidavit, she states Valley Care treated him with Prozac and then switched him to Zoloft. Id.

b) Oral Testimony

In addition to the affidavits, Ms. Elson testified during the June 14, 2021 hearing. She reviewed her affidavits and some of the records in preparation. Tr. at 144.

When asked to described Mr. Hodge's general health from birth to age 16, she stated he was "very healthy." Id. She testified that during a camping trip with lots of ticks, Mr. Hodge received a bull's-eye rash and subsequently developed OCD symptoms. Tr. at 144-45. She recalled the OCD symptoms started at around age 16 and he received an OCD diagnosis at age 17. Tr. at 145. Despite the symptoms, she insisted his life was "very normal." Tr. at 146. However, he had to quit school in eleventh grade because Ms. Elson and Mr. Hodge had moved several times and "the OCD made him work a little bit slower because he would get caught up counting" and with "ritualistic behavior." Id.

His rituals included "[a] lot of checking[.]" Id. This included turning lights, faucets, and the oven on and off, going up and down the stairs, and avoid cracks in the sidewalks. Tr. at 146-47. On a bad day, Mr. Hodge would spend about 20% of his day consumed by OCD symptoms. On good days, it was not noticeable. Tr. at 147. She recalled Mr. Hodge getting OCD treatment at Valley Care, but could not remember the name of the doctor that diagnosed him. Tr. at 147. She stated he was on Prozac during this time period. Id. Ms. Elson estimated she took Mr. Hodge to Valley Care about four or five times between 2003 and 2004. Tr. at 202.

During cross-examination, Ms. Elson was asked about whether Mr. Hodge was seeing other doctors or receiving other treatment at around age 16 when the OCD symptoms purportedly started. Tr. at 161. Ms. Elson responded: "It's kind of hard to remember. Everything is so – just such a blur now. I may have, about that time, gone to Dr. Nasse, but other than that, I'm sorry, I don't remember." Id. She could not recall, without checking her notes, what grade Mr. Hodge was in when she separated from her husband. Tr. at 165-66. "The dates are very fuzzy for me right now. It's just been so long." Tr. at 166.

After being reminded that Mr. Hodge was placed on Adderall in 2004, Ms. Elson noted that Mr. Hodge took Adderall only one time. Tr. at 163. She stated she did not fill the prescription. Tr. at 170. She could not remember if Dr. Nasse prescribed any other medication, and thought Mr. Hodge saw him only twice. Tr. at 167. She recalled Mr. Hodge taking Zoloft for a couple of weeks in 2005. Tr. at 170. But, it was "hard to remember all the medications." Tr. at 171.

Respondent's counsel asked Ms. Elson if she had any recollection of the month or year that the Big Sur camping trip took place. She responded: "I know it was not – I know it wasn't – maybe spring. I'm literally guessing. . . . It would have been like summer or spring, something like that." Tr. at 192-93. She proceeded to say Mr. Hodge was about 14 or 15 years old on that trip (which would be between 2001 and 2002). Tr. at 193.

5. Expert Commentary

The petitioner submitted several expert reports. Most of the content of these reports focus on Mr. Hodge's health in 2006 and beyond. Some opinions were generated about Mr. Hodge's health prior to the 2006 vaccinations. However, these opinions were based on the medical records and affidavits available to Dr. Tornatore at the time of each report.

a) Dr. Tornatore's First Expert Report

Ms. Elson filed Dr. Tornatore's first expert report on August 23, 2013. Exhibit 18. This report largely focused on records from 2009, three years after Mr. Hodge's hepatitis vaccinations, as limited records were available to him at this time. Based on medical records from 2009, in which doctors attempted to understand Mr. Hodge's past and had to rely on histories provided by Mr. Hodge and Ms. Elson, Dr. Tornatore opined that Mr. Hodge began experiencing "some symptoms (progressive fatigue, headaches, memory disturbances, myalgias)" in 2005. Id. at pdf 4. Working with the records available to him at that time, he estimated the neuroborreliosis onset was in 2005. Id. These are the only aspects of Mr. Hodge's pre-vaccination health discussed in this report.

b) Dr. Dasher's Expert Opinion

The next report submitted by Ms. Elson was from Dr. Robert Dasher, a psychiatrist. Exhibit 22. This report was filed on October 16, 2015. It does not address Mr. Hodge's pre-vaccination health history, as it predates his care and treatment of Mr. Hodge. Thus, this report will be discussed in the section regarding health after the 2006 vaccines.

c) Dr. Tornatore's Second Report

Ms. Elson filed Dr. Tornatore's next report on January 23, 2017. Exhibit 29. By this time, petitioner's counsel had developed the evidence a little more, but not substantially. The only pre-vaccination health history discussed in this report is Mr. Hodge's March 10, 2004 visit to Dr. Menzer, in which he complained of sinus pressure for two months. Id.; see exhibit 3. Again, based on the information available at that time, Dr. Tornatore opined that Mr. Hodge "contracted Lyme disease in 2005" and developed symptoms of OCD shortly thereafter. Exhibit 29 at 7. Most of this report contains commentary on Mr. Hodge's health after his 2006 vaccinations and medical theories regarding his condition. See generally id.

d) Dr. Tornatore's Third and Fourth Reports

Ms. Elson filed supplemental reports authored by Dr. Tornatore on December 18, 2017 (exhibit 34) and April 30, 2018 (exhibit 35). Due to the issues the being litigated at the time of these reports, the reports do not discuss Mr. Hodge's health before the 2006 vaccinations.

e) Dr. Tornatore's Fifth Report

The fifth and final report from Dr. Tornatore was filed on October 26, 2020. Exhibit 83. Although this report is more comprehensive, the only pre-vaccination medical record discussed is the March 10, 2004 record from Dr. Menzer. Id. at 1, passim. Within the report, the March 10, 2004 record serves as a baseline of comparison. Dr. Tornatore notes that Mr. Hodge did not have subjective reports of neurologic symptoms or objective testing supporting neurologic issues on that date. The remainder of the report considers evidence from the date of the first vaccination onward.

f) Oral Testimony

During the hearing, Dr. Tornatore did not testify much about events prior to the 2006 vaccinations. His assertions about what may have happened prior to 2006 depend on the spare medical records and the testimony provided by Ms. Elson.

Based on the March 17, 2006 medical record (exhibit 5 at 2), Dr. Tornatore opined Mr. Hodge was diagnosed with OCD in 2005. Tr. at 15. He further opined that Mr. Hodge had neuroborreliosis, which caused the OCD. Id. at 16-17. When asked when Mr. Hodge developed neuroborreliosis, Dr. Tornatore relied upon later created medical records and Ms. Elson's affidavits. Id. at 21. He opined "it sounds like there was a trip where they were camping and it sounds like multiple people in the family were exposed to ticks. And so it clearly was somewhere perhaps in that time. Maybe it was after that." Id. Based on the notation that Mr.

Hodge had OCD when he was 17, Dr. Tornatore opined the neuroborreliosis must have started earlier in order to cause the OCD. Id. at 21-22. "It's hard to know . . . when that [tick] exposure was, but it clearly preceded the documented OCD . . . ." Id. at 23.

Aside from the affidavits, Dr. Tornatore reached his opinion that Mr. Hodge had neuroborreliosis by utilizing MRIs and spinal fluid data from 2009, discussed below, along with medical literature. Tr. at 16-17.

B. Mr. Hodge's Health During and After the Vaccinations

The following section concerns Mr. Hodge's health from the date of the first vaccination onward. Information is derived from (1) medical records; (2) statements and evidence regarding missing and unavailable records; (3) testimony from affidavits and oral statements; and (4) expert commentary.

1. Medical Records

The following sections recite the pertinent (available) medical records concerning Mr. Hodge's health following his vaccinations in 2006.

a) Mr. Hodge's Health in 2006

(i) First hepatitis B vaccination

On March 17, 2006, at the age of 18, Mr. Hodge appeared at Noble Community Choice Provider Medical Group ("Noble Clinic") for an adolescent health maintenance exam. Exhibit 5 at 2. The treating doctor was Jorge Rodriguez. Someone told Dr. Rodriguez that Mr. Hodge was feeling pressure in his face. One line reads: "(+) OCD started at 17yrs." Id. Another line states: "mother [unintelligible] at cognitive therapy." Id. The record also states: "[Family] [history]: . . . father = ADD, grandmother = ? OCD". Id.[28]

Physical exams and a neurologic assessment from this visit were all documented as normal. Id. Mr. Hodge weighed 159 pounds. Id. Dr. Rodriguez's assessment of Mr. Hodge included allergic rhinitis, OCD, and possibly sinusitis. He prescribed Amoxil and some other medication. At this March 17, 2006 appointment, Mr. Hodge received the hepatitis A and hepatitis B vaccinations. Id. at 2, 7.

[28] As with other medical records in this case, this record contains difficult to read handwriting. Some aspects are illegible.

A "'STAYING HEALTHY' ASSESSMENT" was completed at this visit. Id. at 5. Generally, it discloses healthy habits. However, "Yes" was marked next to the question about whether Mr. Hodge "Often feel[s] sad, down, or hopeless[.]" Id. The assessment form also notes that medication was used "sometimes" to sleep, relax, calm down, feel better, or lose weight, with "OCD" added in for context. Id. at 6. Additional questions or concerns about health were noted, which included "sinus pain, allergies?" Id.

(ii) Second hepatitis B vaccination

The next medical record is from April 25, 2006, when Ms. Elson brought Mr. Hodge back to the Noble Community Clinic for a follow-up visit. Exhibit 5 at 3. The intake notes suggest Mr. Hodge was seeing a psychiatrist or psychologist, though the doctor's name is not legible. Id. The note states Mr. Hodge was on Zoloft, his mom did not want him taking that drug, and that his mom was concerned about toxoplasmosis. Id.[29] Samples were taken, which were negative for toxoplasma AB IgG. Id. at 10. He weighed 155 pounds at this visit. Id. at 3.

Subjective complaints from the April 25, 2006 visit included uncontrollable eye movement, neck pain, facial pressure, and itchiness. Id. at 3. However, abnormal neurologic findings do not appear to have been documented on this medical record.

(iii) Valley Presbyterian – June 2006

Mr. Hodge's next visit to a hospital was thirty-eight days later, on June 2, 2006. He presented to the Valley Presbyterian Hospital emergency room. Exhibit 6 at 7. The chief complaint was "Dizzy / Eye movement disturbances." Id. The history of present illnesses section states that complaints included "back pain, joint + muscle aches and fatigue since receiving Hep B & A vaccinations 4 [months] ago. Blood tests done = normal per mother." Id. The review of systems indicated problems with fatigue, nasal discharge, bone/joint pain, back pain, headaches, dizziness, and frontal room spins. Id. The physical examination memorializes that Mr. Hodge was "Oriented X 3" with memory intact, and that he was well nourished. Id. A flat affect was noted. An additional note was added that Mr.

[29] Much of the notes from this visit are illegible. See also Pet'r's Post Hearing Br. at 9 (acknowledging that the record cannot be deciphered completely).

Hodge had a negative vertical/horizontal nystagmus test.[30] Id. The neurological examination was within normal limits. Id.

At this June 2, 2006 visit, Mr. Hodge received a CT brain scan without contrast enhancement. Id. at 4, 10. The record notes a history of headaches. The impression note for the CT scan was "Normal." Id. at 4. A diagnosis from the visit was that Mr. Hodge had neurological problems without specifying the nature of those neurologic problems. Id. at 2. Impression notes listed "dizziness" and "arthralgias – myalgias s[tatus]/p[ost] Hepatitis vaccination." Id. at 6. Mr. Hodge was discharged that day, with his condition "Improving" and "Good." Id. He was given Meclizine.[31] Id.

Ms. Elson called the Noble Clinic on June 8, 2006. Exhibit 5 at 4. The phone note appears to read:

> Mother called and was very upset about neurologist and according to mother neurologist was very rude and didn't know Zoloft was used for OCD and she did not trust him. Mom concerned about vit. B deficiency and was pushing for MRI for Jeremy. Informed mom will do MRI request and get CT scan fr[om] Valley Presbyterian. [Three illegible words]. Informed mother will report to VAERS if [illegible] vaccine related adverse effect.

Id.[32]

(iv) Encino/Tarzana – August 2006

More than two months passed before Mr. Hodge's next medical appointment. On August 22 and 23, 2006, Mr. Hodge presented to the emergency department at Encino/Tarzana Regional Medical Center. Exhibit 4 at 2-15.[33] On

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[30] Nystagmus is "an involuntary, rapid, rhythmic movement of the eyeball, which may be horizontal, vertical, rotatory, or mixed." Dorland's at 1289.

[31] Respondent stated this is a medication for dizziness and nausea. See Resp't's Post Hearing Br. at 10.

[32] This difficult to read note was mostly deciphered by petitioner. See Pet'r's Post Hearing Br. at 10.

[33] In referencing this exhibit, petitioner wrote as though there was no August 22, 2006 visit, only a visit on August 23, 2006. Pet'r's Post Hearing Br. at 10.

August 22, 2006, he was evaluated by Dr. Ralph Baca and complained of diffuse paresthesias. Id. at 12. The note memorialized that "[t]he patient state[d] these symptoms have been evident intermittently since receiving [the] hepatitis vaccine earlier this year. The mother also state[d] that she [was] concerned that the patient, her son, appears more jaundiced, and also complains of dizziness associated with generalized weakness." Id. Mr. Hodge denied any depression, anxiety, or hallucinations. Id. Mr. Hodge's eyes were examined and normal at that time. Id. at 13. A chemistry panel, thyroid study, and urinalysis were ordered, with normal results. Id. He was discharged as stable. The diagnostic impression was "Neuropathy, etiology uncertain." Id.

Mr. Hodge returned to the emergency department the next day, August 23, 2006. Id. at 2. The record notes Mr. Hodge stated, "it's hard to feel my skin" and indicates his "mom state[d] it all started p[ost] Hepatitis vaccine." Id. at 4. OCD was recorded under medical/social history. Id. The neurological assessment listed Mr. Hodge was alert and oriented "x 3". Id. Mr. Hodge weighed 160 pounds at this visit and the record states his skin color was normal rather than pale, flushed, or jaundiced. Id.

(v) UCLA – November 2006

Mr. Hodge's next encounter with medical professionals was on November 3, 2006, when he arrived at the UCLA emergency room. Exhibit 67 at 1-10; see also exhibit 32 at 26-35 (duplicate). The chief complaint was decreased sensation to skin for seven to eight months, as well as facial pain and inability to relax. The review of systems indicated he had depression but did not have weight loss. Exhibit 67 at 2. The discharged impression was OCD and numbness. Id. at 3. The record indicates Mr. Hodge was awaiting a psych evaluation, but left prior to being assessed. Id. at 5.

(vi) Mr. Hodge's Health in 2007 – 2008

The parties stated that between November 2006 and July 2007, there are no available medical records. See Pet'r's Post Hearing Br. at 11; Resp't's Post Hearing Br. at 11.

However, a more thorough search for records also led to the discovery of medical records from the emergency department of Providence Saint Joseph

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Respondent treated the record as referencing two visits, August 22 and August 23, 2006. Resp't's Post Hearing Br. at 10-11. It is possible that the reference to August 22, 2006 in the record was a mistake and that there was only one visit. It is also possible there were back-to-back visits.

Medical Center on June 20, 2007.[34] Mr. Hodge was seen for "depression, numbness to both hands." Exhibit 65 at 2. The chief complaint was "[Patient] has multiple psychological problems x 'months' [complains of] physical 'pain.' Sudden onset on & off x 'months.'" Id. The history of present illness recounts his history of problems: "Mother states that over the last year, he has had numerous symptoms including headache and chest pain, his Adam's apple appears to be large, shortness of breath, numbness and tingling in his extremities, weight loss, difficulty eating, back pain, and uncontrollable fits. She describes this and many numerous somatic complaints." Id. at 5. The June 20, 2007 record notes Mr. Hodge's vitals and states Mr. Hodge was "a well-developed, well-nourished male." Id.

The history of present illness also presents Ms. Elson's account of her efforts to obtain medical care.

> Mother states that she has been to many emergency departments and clinics. Labs have been done, which showed no abnormalities. She states that approximately 1 year ago he had a head CT, which showed no abnormalities. Otherwise, she is here requesting a neurologic evaluation and MRI. She states that she has not been able to receive any authorizations from her insurance. . . . The patient himself denies any acute complaint at this time.

Id.

Upon examination, the doctor from the emergency room, Lawrence E. Wells, recorded Mr. Hodge was "in no acute distress. He [was] awake, alert, and oriented to person, place, and time. . . He [was] able to ambulate up and down the hallway without any difficulty whatsoever." Id. Dr. Wells stated that he "advised the mother that [Mr. Hodge's] symptoms appeared to be somatic signs of severe major depression and anxiety." Id. at 6. Dr. Wells also "strongly advised the mother that she needs to follow up at one of the County Facilities if she is unable

[34] Despite the presence of the Providence Saint Joseph exhibit, Ms. Elson asserted, "From November 2006 to July 2007 no medical records are available." Pet'r's Post Hearing Br. at 11.

to follow up with a neurologist and I have told the mother than my suspicion is that the patient has somatization of his psychological problems." Id.[35]

On July 10, 2007, Mr. Hodge presented to West Valley Mental Health Center for an Adult Initial Assessment. Exhibit 11 at 2-12, 14-16. Under Presenting Problem / Chief Complaint, the form states:

> [History]: OCD: 2 [year] [history] of tapping, touching, counting, stress [with] environment made it worse. [History] of depression. Took Zoloft (4 [weeks]) made him worse, Prozac made him feel suicidal, racing thoughts [with] counting. No current S[uicidal] I[deation]. Not sleeping, argumentative at times. No good sleeping, naps during day. Sometimes sleeps too much. Very pale (+) psychosis, seeing shadows. 'It's bad air, environmental.'

Id. at 3. The form states Mr. Hodge had only completed 10th grade. It additionally notes Mr. Hodge's dad had bipolar and ADD, and that his grandmother was a hoarder, suggesting a "strong family h[istory] [of] mental illness." Id. Under medical history, the record indicates no problem with "weight/appetite ch[an]g[e]". Id. at 4. The record indicates he was taking Xanax, prescribed by Dr. Nasse. Id. at 3, 5. The diagnostic summary stated Mr. Hodge had a history of psychosis and OCD since age 16. Id. at 8. Medical case management was recommended. Id. He did not return for treatment. Id. at 13.

The next available medical record is from West Hills Hospital and Medical Center on September 9, 2007. Exhibit 8 at 76. Mr. Hodge was evaluated by Dr. Alan Kuban. Dr. Kuban wrote that Mr. Hodge was brought in by his mother "for evaluation of chest pain, OCD problems, [and] palpitations." Id. Dr. Kuban observed Mr. Hodge was a vague historian and that Ms. Elson "almost control his situation and provides the history." Id. Ms. Elson related that Mr. Hodge had been complaining of chest pain for over 6 months and had intermittent throat infections. Id. Dr. Kuban noted Ms. Elson also conveyed that Mr. Hodge had "a significant change in his personality over the last 18 months. She believes this may be related to previous hepatitis vaccinations." Id. at 76-77. Dr. Kuban opined Mr. Hodge

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[35] At Ms. Elson's request, Dr. Wells obtained an imaging study of Mr. Hodge's sinuses, which was normal. Exhibit 65 at 7. Other than mentioning that Ms. Elson was requesting an MRI, Dr. Wells's note does not discuss whether an MRI was appropriate. See exhibit 65.

"clearly has significant impairment due to his OCD." Id. at 77. He recommended a neurologic consultation.[36] Id.

Mr. Hodge received mental health therapy at San Fernando Valley Community Mental Health Center ("Transitional Youth") on a somewhat regular basis between November 2007 and February 2008. See exhibit 10. He received psychotherapy treatment, as well as numerous medications, including Risperdal, Lithium, Ativan, and Fluoxetine. Id. at 3, 59, 65. An initial assessment was that he suffered from OCD. Id. at 9. Concerns were expressed about the medications and services provided. See generally id. Attendance became less frequent in the spring and summer of 2008. After no contact for several months, on September 16, 2008, Transitional Youth closed Mr. Hodge's case file. Exhibit 10 at 8.

The Pfeiffer Treatment center performed a urinalysis for Mr. Hodge in March 2008. See exhibit 57. Malabsorption and low histamine levels were reported. Id. at 2. Diet and nutrition changes were recommended. Id. at 7, passim.[37]

Mr. Hodge arrived at the West Hills Hospital emergency room on December 4, 2008, with a chief complaint of a lesion on his left thigh and left eyelid. Exhibit 8 at 25. Past medical history listed him as bipolar, and suggests he was taking Risperdal and lithium at that time. Id. The treater considered the left thigh rash to be consistent with ringworm. Id. He was discharged in a stable condition.

(vii) Mr. Hodge's Health in 2009 – MRIs and Lyme Disease Diagnosis

Mr. Hodge was seen at Olive View / UCLA Medical Center ("Olive View") in February 2009. Exhibit 7 at 8. Chronic headaches were reported. Id. at 5-8. Under the neurologic assessment, the record notes Mr. Hodge was oriented, and his gait was within normal limits, though sensory issues were discussed.[38] Id. at 8.

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[36] Citing to exhibit 8 at page 77, respondent's post hearing brief states that a neurologic consultation was not recommended. Resp't's Post Hearing Br. at 13. This assertion is inaccurate. See exhibit 8 at 77 ("I do recommend neurologic consultation").

[37] Subsequent testing in February 2009 showed high levels of kryptopyrrole in Mr. Hodge's urine.

[38] Unfortunately, the handwritten notes on this copy of the medical record are largely illegible.

Though the handwriting is difficult to discern, it appears follow-up with neurology and an MRI were ordered. Id.

On May 19, 2009, an MRI was performed on Mr. Hodge's brain at the Olive View. Exhibit 2 at pdf 3-4; exhibit 7 at 210-211. The study's findings note:

> Multiple white matter hyperintensities are seen in the periventricular, deep and subcortical white matter, one of which on FLAIR axial image 14 of series 4 has its long axis parallel to the long axis of the ventricles, I suspect the presence of demyelinating disease although the patient is a young male rather than a young female. Evaluation with contrast was not requested and not done and no history is provided. The differential diagnosis for the above white matter hyperintensities does include gliosis, migraine headaches, collagen vascular disease, vasculitis or ischemic change which would be too early in this patient. The brainstem is unremarkable.

Exhibit 2 at pdf 3-4.[39] The interpreting doctor's impression was "demyelinating disease, in the absence of adequate clinical history" with "a wide differential diagnosis." Id. at pdf 4. The doctor recommended a follow-up exam with contrast using a multiple sclerosis ("MS") protocol. Id.

On June 5, 2009, Mr. Hodge had blood drawn and analyzed for further diagnostics. Exhibit 7 at 209. It was notable for *B. Burgdorferi* IgG IFA with a 1:80 titer, a borderline positive result. Id. *B. Burgdorferi* IgM was <1:10. Id. These results suggested Mr. Hodge had Lyme disease. However, subsequent western blot testing on June 18, 2009 was negative for *B. Burgdorferi* IgG. Id. at 204. Additional serology tests were conducted by Dr. Mathisen on September 10, 2009. Exhibit 63 at 1. The results were negative / inconclusive. Id.

Mr. Hodge was evaluated by a neurologist, Dr. Shri Mishra, at Olive View on August 4, 2009. Exhibit 7 at 45-46. He had "nonspecific complaints (headache, intermittent arm numbness, neck/back spasms)" and the doctor also noted psychiatric [disorders] included OCD behavior, bipolar vs. schizoaffective [disorder] all of varying onsets starting at age 17." Id. at 45. The chief complaint /

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[39] Citing to exhibit 2, petitioner's post hearing brief states that Mr. Hodge received this MRI on February 14, 2009. Pet'r's Post Hearing Br. at 8. This assertion is inaccurate.

history of present illness section discussed Mr. Hodge's medical history.[40] The record states Mr. Hodge "was normal prior to age of 17, abrupt onset OCD-like behavior (counting, checking, etc) over 1 month, then onset of a mental 'fogginess' / 'detachment from reality' of insidious onset that has since waxed and waned with periods of 'normalcy'." Id. at 46. It further states Mr. Hodge received his routine hepatitis B vaccine at 18.5 and that he experienced subsequent stabbing pain, and muscle and skin tightness with spasms of gradual onset. The record recounts a tick exposure, and that Ms. Elson was convinced the symptoms were secondary to the vaccine. Id. The assessment notes differential diagnoses, including "MS, Lyme d[isease], post vaccination demyelinating d[isease], other demyelinating d[isease]." Id. at 45. The doctor ordered an MRI with MS protocol as well as a lumbar puncture and blood tests to rule out "MS, Lyme, other encephalitis, etc[.]" Id.

On August 11, 2009, Mr. Hodge received another brain MRI, with and without contrast, so that it could be evaluated for MS and compared to the May 19, 2009 MRI. Exhibit 7 at 65-66. The doctor's impression was "[b]ilateral demyelinating plaques again noted on today's exam. Plaques also present at callosal septal interface (inferior surface or [sic] corpus callosum). No abnormal enhancement." Id. at 65. No new abnormalities were appreciated. Id. at 65.

Mr. Hodge had a CT scan of his sinuses on September 17, 2009. Id. at 64. The findings were unremarkable.[41]

On October 19, 2009, Mr. Hodge had a PET scan of his brain for "suspected neurolyme." Id. at 178. The findings included "diffusely decreased metabolic activity in the cerebral cortex and basal ganglia" with non-specific distribution. Id. Additionally, "apparent hypermetabolism" was observed "near the midline in the region of the parietal lobes, [which] likely corresponds with area of prominent gyral folds seen on MRI." Id.

On October 22, 2009, Mr. Hodge was evaluated at Olive View by psychiatrist Robert Dasher. Id. at 23. Dr. Dasher's assessment was that Mr. Hodge had a cognitive disorder, but he could not provide further specification. Id. He proposed neuro-psychological testing and a follow-up visit in three weeks.

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[40] Given that Mr. Hodge had not seen Dr. Mishra before, it seems likely that this history was provided by Ms. Elson, rather than being derived from Dr. Mishra's review of records.

[41] The parties did not comment on this scan in their briefs, and the findings seem to be of little relevance.

Mr. Hodge was evaluated again at Olive View on November 13, 2009, as an outpatient in the ophthalmology clinic. Id. at 9. The assessment noted Mr. Hodge had an "MRI concerning for demyelinating lesions." Id. It further stated "[no] clinical evidence of optic nerve involvement [for either eye]. No evidence of intraocular inflammation, infection, given ?history of chronic Lyme disease." Id.

On November 17, 2009, Mr. Hodge underwent a lumbar puncture. Id. at 173-75. The cerebrospinal fluid ("CSF") contained more than 5 well defined oligoclonal bands. Id. The report stated the bands "indicate abnormal synthesis of gammaglobulins in the central nervous system." Id. The interpreter found this evidence supportive of a MS diagnosis, but noted other clinical and laboratory data was necessary for clarification. Id. *B. burgdorferi* was not detected in the CSF sample. Id. at 173.

On December 11, 2009, Mr. Hodge was evaluated by Dr. Glenn Mathisen, an infectious disease specialist. Exhibit 14 at 3. Mr. Hodge's medical history was recounted. Dr. Mathisen opined that the neuropsychiatric testing demonstrated cognitive deficits that were not compatible with standard psychiatric diagnoses such as schizophrenia or affective disorders. Id. Dr. Mathisen's assessment states the following:

> Neuropsychiatric disorder: [patient's] symptoms are compatible with chronic neurolyme as described in literature. He has a positive peripheral serology (ELISA) but does not meet CDC criteria by Western Blot. [Patient] and family are aware of this but still strongly wish IV therapy. Multiple sclerosis is the other possibility but is not completely supported by clinical course, MRI and LP results. I believe that a course of antibiotic therapy is reasonable and plan to repeat tests (MRI; PET scan; neuropsychiatric testing) following completion of therapy. Depending upon [patient's] response, may also give 6 month course of doxycycline after initial [reaction] with ceftriaxone. [Patient] and family member are fully aware of the potential benefits and risks of this course and have decided to go ahead with treatment.

Id.

On December 17, 2009, Mr. Hodge had a follow-up visit with Dr. Dasher. Exhibit 7 at 37. Dr. Dasher's assessment was "OCD-like" symptoms associated with anxiety and "possible Lyme" disease with neurological symptoms. Id.

On December 22, 2009, Mr. Hodge presented to the emergency department at Olive View with a body rash and a week of fevers. Id. at 3. The recent antibiotics PICC line was noted. Id. The rash resolved within a day. Id. at 68. Diagnoses included a ceftriaxone or other drug induced rash and "less likely" a Jarisch-Herxheimer reaction. Id. When he was evaluated the following day, December 23, 2009, Mr. Hodge underwent visual evoked potential testing. Id. at 27. The results were normal and interpreted as not supporting an MS diagnosis. Id. Dr. Mishra conducted EMG testing, and the study was normal, not supporting a polyneuropathy. Id. at 29-31.

Dr. Mathisen evaluated Mr. Hodge again on December 31, 2009. His assessment remained "possible Lyme disease" but noted "[d]iagnosis is not proven as CSF serology has been negative." Id. at 21.[42]

(viii) Mr. Hodge's Health from 2010 to the Present

The parties dedicated relatively little attention to medical records from 2010 to the present. See Pet'r's Post Hearing Br. at 15-16; Resp't's Post Hearing Br. at 19-21. The undersigned has reviewed the medical records from 2010 onward and determined that they are unlikely to provide information regarding Mr. Hodge's pre-vaccination condition(s) and whether the vaccines caused any sequelae. Nevertheless, a summary of these records is as follows.

Mr. Hodge had follow-up visits with Dr. Mathisen and Dr. Dasher between January 2010 and March 2012. See exhibit 7 and exhibit 12. Via referral from Dr. Mathisen, Mr. Hodge was evaluated by Dr. Wendy Clough on January 11, 2010. Exhibit 13 at 4-7. She concurred with Dr. Mathisen's assessment, stating "most likely [Mr. Hodge] does have Lyme disease." Id. at 4. Dr. Clough wondered whether Mr. Hodge's hospitalization in December 2009 was due to a reaction to the ceftriaxone or treatment of the Lyme disease. Id. at 5, 7.

In late January 2010, Dr. Mathisen started treating Mr. Hodge with IV penicillin. Exhibit 7 at 19. Subsequently, on February 25, 2010, Dr. Mathisen assessed Mr. Hodge as improving, with increased mental sharpness and "better OCD." Id. at 15.

On May 12, 2010, Mr. Hodge had a normal EMG and nerve conduction Exhibit 12 at 245-47. Exhibit 7 at 32-33. He had a normal EEG study on May 17, 2010, with no evidence of a seizure disorder or brain dysfunction identified. Exhibit 7 at 32-33. Mr. Hodge was started on Doxycycline along with the IV

[42] Some of the handwriting in this note is difficult to read.

penicillin treatment. Id. at 11. The penicillin treatment was discontinued in June 2010. Id. at 10.

An MRI from April 14, 2011 found some lesions in the left frontal lobe had increased and there were two or three new punctate lesions in the frontal gyrus. Exhibit 12 at 11. "Differential considerations remain the same but this could be compatible with Lyme disease given patient history." Id.

An MRI was performed in January of 2012. Exhibit 14 at 252-53. There was not much change from the April 2011 MRI. Id. at 253. The interpreting doctor thought the results were most consistent with known history of Lyme disease. Id.

Mr. Hodge began seeing Dr. Kevin Pimstone, a new primary care doctor, in May 2014. Exhibit 32 at 56-58. Dr. Pimstone provided a recitation of Mr. Hodge's history. Id. at 63. Dr. Pimstone's impression was neurocognitive decline in addition to OCD symptoms and depression since age 19, possible Lyme disease, abnormal MRI consistent with "possibly demyelinating disease versus Lyme disease," and elevated Epstein-Barr antibody, among others. Id. at 64. Mr. Hodge returned to Dr. Pimstone on numerous occasions and was referred to various specialists throughout 2014 and 2015. See, e.g., id. at 285, 689, 781, 1361, 1481, 1559, 1590, 1643, 2008. A neurologist, Dr. Giesser, evaluated Mr. Hodge on January 20, 2015, as he was experiencing numbness in his hands and feet, heat sensitivity, difficulty thinking, and auditory/visual hallucinations at that time. Id. at 781.

In 2015, Mr. Hodge was evaluated by Dr. James Landen. See exhibit 33. Assessments included psychosis, bipolar disorder, and tardive dyskinesia symptoms. Id. at 1. His reactions to various medications were recounted. See id., passim.

In 2018, Mr. Hodge was taking to the emergency department of West Hills Hospital and treated for "chest pain of unclear etiology." Exhibit 59.

2. Unavailable Records / Unsuccessful Records Requests

The following recites the unsuccessful records requests from facilities that may have treated Mr. Hodge from 2006 onward.

Records were requested from Noble Community Medical Associates of LA. A verification letter revealed the facility had a flood in early 2017, in which records, including Mr. Hodge's, were destroyed. Exhibit 64.

A records request was sent to Step Up / Daniel's Place, a mental health support center. The facility indicated they did not have any records indicating Mr. Hodge was enrolled in their mental health services. Exhibit 62.

Despite the existence of some records from Transitional Youth, discussed above, the records department later stated Mr. Hodge was never in one of their programs. See exhibit 82.

In 2018, records were requested from Valley Coordinated Children's Services within the Los Angeles County Department of Mental Health. The records requested were destroyed due to the department's retention policy. Exhibit 72.[43] For similar reasons, records from West Valley Mental Health were destroyed. Exhibit 81.[44]

3. Testimony

Ms. Elson's recollections of events after the 2006 vaccinations are noted below.

a) Ms. Elson's Affidavits

The following section recites the remainder of Ms. Elson's affidavits. The remainder concerns Mr. Hodge's health from the date of the first hepatitis vaccination (March 17, 2006) onward.

(i) Affidavit #1

Ms. Elson recalls that on the evening of March 17, 2006, "[Mr. Hodge] became violently ill with chills followed by hot flashes and stabbing pains that felt like electric shocks up his spine, his legs, and his arms." Id. at pdf 4. Ms. Elson thought he caught the flu. He improved over the next few days and still felt tired, but his symptoms did not seem too alarming. Id. After the second booster vaccination on April 25, 2006, Mr. Hodge's "health declined rapidly" as he "complained of horrible fatigue, numbness in his arms, and stiffness throughout his body. He was unable to concentrate for any length of time. He left school . . . ." Id.

Next, she recalled rushing Mr. Hodge to the ER at Valley Presbyterian Hospital on June 2, 2006, due to complaints of terrible body pain, stiffness, and

[43] It is possible Mr. Hodge was treated at this facility prior to 2006.

[44] Some records from West Valley were provided and are discussed above. This implies the West Valley records are incomplete.

numbness throughout his body. "He was in a 'fog' where he could not remember things happening around him." Id. She claims he lost his health insurance because he was deemed to have a pre-existing condition. Subsequently, she recalls he received a brain MRI at Olive View, which revealed an undiagnosed demyelinating condition and evidence of at least five oligoclonal bands. Id. at pdf 4-5. The suspicion at that time was MS.

(ii) Affidavit #2

Regarding the events of 2006 onward, the next affidavit continues:

> After the March 2006 shot he shot [sic] it was night and day. It was like he got hit by a bus. He got very very ill within the month after the shot. He deteriorated rapidly. He went to the emergency room within a week. He had severe pain shooting up and down his spine. He was screaming in pain. His eyes were jittery and moving all over the place. That didn't stop for the next year. He had to drop out of school.

Exhibit 19 at 1. She claims that after "the shot" (it is unclear whether this refers to the first or second hepatitis B vaccination), "he couldn't do anything. Couldn't do any of the things he loved. [Mr. Hodge] was wiped clean. Like his brain was scrambled." Id.

Ms. Elson reported that his health declined rapidly within six months. She alleged: "He didn't know who he was. He forgot his past. He was urinating and defecating in his pants. He would go days without eating. He dropped to 90 pounds." She recalled the doctors' visits that followed, in which Mr. Hodge was scared. "He would tell them his symptoms but then as it progressed he stopped talking to the doctors. I communicated for him. It was too difficult for him." Id. at 2. She described him as "completely mentally disabled" between 2006 and 2009.

Regarding insurance Ms. Elson stated they Mr. Hodge on MediCal – Medicaid. However, "[t]hey refused to cover MRIs. He was constantly refused medical care. He was denied an MRI numerous times. We requested MRIs in every emergency room we were in and were denied. Easily 12-14 times we asked for MRIs and were told no." Id.

(iii) Affidavit #3

This affidavit makes numerous claims regarding Mr. Hodge's functioning after his 2006 vaccinations. Ms. Elson testified before 2006, Mr. Hodge engaged

in some OCD rituals, discussed above. She testified that after the 2006 vaccinations, his OCD rituals consumed his entire life. Exhibit 21 at 3.

She stated Mr. Hodge was on track to get his GED toward the end of 2005, but could not attend school with the rest of his peers and his OCD caused him to fall too far behind to keep up with ordinary classes. Id. She testified his symptoms and rituals became so severe during the summer of 2006 that he could not attend any classes. Id.

Ms. Elson alleged that after the April vaccine, Mr. Hodge could not form full, coherent sentences and he instead screamed phrases like "I don't even know who I am" and "I can't feel anything." Id. She noted rapid eye fluttering during the summer of 2006. She alleged he could not sleep for days at a time, and could not properly use the restroom for multiple years. Id. at 3-4.

"The hallucinations started during the summer of 2006." Id. at 4. She recalled he said angels, demons, and people screamed at him; the hallucinations were sometimes comforting, other times scary, and persisted for years. Id.

Ms. Elson alleged Mr. Hodge "tried to burn down [their] house the summer of 2006–more than once." Id. She wrote that he would turn on the gas stove and put paper and other objects, including his own hand, into the flames. She reportedly feared he would burn the house down.

Ms. Elson stated Mr. Hodge "could not feed himself for several years after the vaccine. He weighed 160 pounds around August of 2006. By 2007 he weighed approximately 90 pounds." Id. She alleged he went days without eating or drinking water, and at other times, "took jars of salt and dumped them on his food." Id. at 4.

She alleged he was "afraid to leave the house" but also that "[m]ost days of the week, between 2006 and 2009, he would not come inside the house and [she] had to sleep outside in [her] car watching him." Id.

Ms. Elson alleged that Mr. Hodge lost insurance because of his preexisting OCD, and without insurance, "every facility shooed us away." Id. After obtaining MediCal-Medicaid, she started taking him to Transitional Youth. He became secretive about his hallucinations. Id. She recalled holistic/nutritional approaches with Pfeiffer, which were to no avail. She next recalls that a volunteer psychiatrist at Daniel's Place (a free mental health services clinic) told them Mr. Hodge was too much work, so they stopped going there after one visit. Id. at 5. She reported

that things "remained pretty constant until about [2013] when the Risperdol [sic] started to work." Id.[45]

The general theme of this affidavit was the Mr. Hodge had regressed in extreme ways. Ms. Elson alleged he could not eat or drink, comprehend basic sentences, engage in personal hygiene, wear clothing, or properly use the restroom. She alleged the only "activity" he could do was go aimlessly biking for miles into the woods or into the middle of the highway. He ceased to do the activities that were normal for him prior to 2006. Additionally, "[h]e can't remember most of what has happened to him since 2006." Id. at 5.

(iv) Affidavit #4

The purpose of the third affidavit was straightforward and responsive to statements made by experts retained by the Secretary. Dr. LaRusso and Dr. Dunn implied that because Mr. Hodge signed consent forms, he had mental capacity. Ms. Elson wrote Affidavit #3 to clarify that "in many cases [she] signed *for* Jeremy" (*emphasis* in original). Exhibit 26 at 1. She continued, noting Mr. Hodge "would not and could not do certain things. . . . [She] would talk for him at the doctors' offices. [She] would give his history etc. . . . He was in no way capable of handling his own affairs or make deliberate decisions." Id.

(v) Affidavit #5

In this affidavit, Ms. Elson recounts that "[w]ithin days" of the March 17, 2006 vaccines, Mr. Hodge "starting having headaches, dizziness, shooting pains up and down his back, and numbness in his arms. After a while, he also developed these weird eye movements that he couldn't control." Exhibit 71 at 3. She reported he could no longer play basketball.

The two returned to Noble Community Medical Center on April 25, 2006. She wrote that she told the doctor about the problems Mr. Hodge was having. Id. The symptoms got worse after the second shot. She alleged they could not wait for a neurologist appointment, so she took Mr. Hodge to Valley Presbyterian on June 2, 2006. She then defers to the medical records to describe what was experienced before receiving the 2009 MRI.

She also incorporated her prior affidavits into this affidavit. Id. She also provides some amendments:

[45] A pharmacy record shows Mr. Hodge was prescribed Risperdal as early as 2004. See exhibit 23.

> However, there are a couple of corrections. In Exhibit 19, I described the things as if there was only one shot given in March of 2006. Reviewing the records of the visits for March 16, 2006 and April 25, 2006 has helped me to describe what I remember after each of those shots better.

Id. At this point in time, Ms. Elson's recollection was that Mr. Hodge only saw Dr. Nasse a couple of times after the 2006 vaccines, and not before that point. "It is really hard to remember things from so long ago, but getting the records that the Special Master asked us to get has helped." Id. at 4.

Ms. Elson reiterated that Mr. Hodge had bad mood swings, provided incoherent communications, and could not participate in any of the activities he used to enjoy. Id. She likened his condition to dementia.

(vi) Affidavit #6

In the final affidavit, Ms. Elson responded to specific questions posed by the undersigned. The following subsection concerns events from the date of first hepatitis vaccination onward.

A "'Staying Healthy' Assessment" form was completed at Noble Community Clinic on March 17, 2006. Ms. Elson reported that she filled out the form. Exhibit 86 at 12.[46] On the form, she positively indicated that Mr. Hodge "often feel[s] sad, down, or hopeless," and explained this was due to his OCD. Id.

Ms. Elson indicated Mr. Hodge saw Dr. Nasse after the March 17, 2006 vaccination. Id. at 13. Other than OCD and being somewhat depressed, his "mental health was still pretty normal after the first vaccine." Id. Between the two vaccinations, Mr. Hodge "experienced headaches and shooting pains up and down his back, and numbness in his arms." Id.

After the second vaccine, "he couldn't feel his arms, legs, and skin" and "he experienced severe rapid eye movement." Id. She reported the symptoms continued to get worse, that Mr. Hodge began to tire easily and that his mental health deteriorated. Id. at 14. Though she could not recall specifically when the uncontrollable eye movements began, she stated she knows it got really bad after the second vaccine. Id. "[I]t was constant and progressively worse for at least a year." Id. "All the doctors that saw Jeremy saw it after Noble Community Clinic."

[46] The assessment consists of a series of questions to which one completing the assessment answers the question by placing a check in the box "no," "yes," or "skip."

Id. She also stated he had severe spine and neck pain, and lost sensation in his lower legs and arms. Id. at 15. Similarly, she reported he had coordination and balance issues, and experienced sporadic pain for years. Id.

When asked whether Mr. Hodge was seeing a psychiatrist or psychologist during the summer of 2006, Ms. Elson wrote: "I don't remember. To the best of my knowledge, he was only seeing the people that gave him the Prozac and Zoloft." Id. at 14. She alleges they were denied MRIs due to not having private insurance. Id. at 15-16.

Ms. Elson recalled that they went to Valley Presbyterian instead of the Noble Clinic in June 2006 because they could not wait for a neurologist appointment and she did not trust Noble. Id. at 16. When asked about the medical record indicating Mr. Hodge denied having pain at that visit, she guessed that the notation might be an error. Id. at 17. When asked what the doctor's recommendations were after discharge, she reported it was to go to a neurologist and get an MRI, and that she remembers subsequently going to "at least four or five times to an ER near [them]." Id. at 18.

Between June 3, 2006 and August 21, 2006, Ms. Elson "think[s]" there were living at her mom's place in Encino. Id. She stated that during this time, his OCD "was still there, but the focus was on other problems, so OCD wasn't at forefront of concerns. It seemed like it wasn't as bad, but it came back with a vengeance later on." Id.

She recalled making one or two visits to Encino-Tarzana, and that Mr. Hodge had been having abnormal eye movements and dizziness problems in the days leading up to that visit. Id. at 19. She reportedly asked for an MRI but they could not provide one. Id. at 20. They did not follow instructions to follow-up with a private doctor due to an inability to obtain insurance. Id.

However, Mr. Hodge did have insurance through Health Net for their visit to UCLA Medical Center on November 3, 2006. Id. She reported his OCD was "about the same as before" at this visit. Id. She alleged that she "begged for an MRI, but they refused." Id. at 21. The discharge plan was to follow-up with a private doctor or county or community clinic. Ms. Elson could not remember whether they did so or not. Id. She also did not have much recollection of what they did for Thanksgiving in 2006. Id.

When asked what emergency rooms they visited between August 2006 and July 2007, Ms. Elson wrote: "We went to West Valley ER Hospital 6-7 times,

Valley Presbyterian, Encino, UCLA, Northridge Hospital, Ventura County ER, St. Joseph's Hospital Burbank, Pfeiffer Treatment Center outreach." Id. at 23.[47]

Ms. Elson alleged that it was after the July 10, 2007 visit to West Valley that Mr. Hodge's mental health significantly deteriorated. Id. at 22. "He started to go through psychosis and had crippling fear. He would stay in the corner shaking, believing house was evil." Id. at 23.

On September 9, 2007, Mr. Hodge went to West Hills Hospital. See exhibit 8. The record states Mr. Hodge "was recently started on dextrostat for possible ADHD." Id. at 76. Ms. Elson alleged Dr. Nasse prescribed the medication. Exhibit 86 at 24. "He had a bad reaction to it. When he took it, I had to chase Jeremy up the street." Id. She stated Dr. Nasse diagnosed him with possible ADHD but could not remember when. Id.

The affidavit also asked Ms. Elson to recall when she began investigating potential causes for Mr. Hodge's condition(s). She reported she started her research about six months before contacting Mr. Shoemaker. Id. at 26. Additionally, she noted: "Every single doctor after Olive View said that it was a strong possibility that vaccine triggered autoimmune reaction. Even at UCLA I Was told that it was a possibility." Id.

b) Oral Testimony

The undersigned was present for the June 14, 2021 hearing and has reviewed the transcripts on multiple occasions. Due to fact findings explained below in Section IV, a full recitation of Ms. Elson's oral testimony during the hearing is not necessary. Nonetheless, a brief summary follows.

Ms. Elson testified that after the first shot, Mr. Hodge's eyes started fluttering and he complained of spinal pain and itching. Tr. at 149. Though the two allegedly told Dr. Rodriguez about the eye fluttering, it was not reflected in the medical record. Id. Then, "[a]ll hell broke loose" after the second hepatitis vaccine. Id. at 150. She testified she requested an MRI "[e]very time" they went to an emergency room, but was denied until 2009 because they had Medi-Cal / Medicaid. Id.

She testified his eye fluttering got worse after the second vaccine and he experienced horrible pain, weakness, and dizziness. Id. at 151. Similarly, she

[47] It seems that West Valley is a mental health treatment center, not an emergency room. See exhibit 11. If there is a West Valley emergency room, records from that facility were not filed.

alleged his personality changed and his ritualistic behavior became constant. Id. She stated she reported all of these symptoms when she took him to the hospitals. Id. On cross-examination, she professed to not recalling several details. Id. at 183-188, 193-194.

4. Expert Commentary

For the reasons discussed below, a full recitation of the experts' commentary on Mr. Hodge's condition after the 2006 vaccinations is not necessary. The relevant portions of Dr. Tornatore's opinions are explained below in Section V.

Dr. Tornatore's testimony mirrored Ms. Elson's statements. He noted that numbness and tingling followed the vaccines and were suggestive of a neurologic vaccine injury. Tr. at 25. He postulated the vaccines caused autoimmune demyelination, which aggravated the neuroborreliosis (which he characterized as an underlying autoimmune inflammatory condition). Id. at 26-27. In his opinion, the reported eye fluttering was a neurological manifestation of vaccine injury. Id. at 27. In assessing Mr. Hodge's clinical picture, Dr. Tornatore assumes Mr. Hodge's OCD was a manifestation of neurolyme. Id. at 34, 39. This assumption, coupled with the 2009 MRI and spinal fluid, forms the foundation of his significant aggravation theory. Id. at 34. But for exposure to Lyme disease via the tick bite, Dr. Tornatore opined, Mr. Hodge would not have OCD. Id. at 42.

However, Dr. Tornatore acknowledged that "when [ ] the actual infection happen[ed] . . . is very difficult to discern from the records." Id. at 34. Nonetheless, he maintained confidence that neuroborreliosis preceded the vaccinations and that the vaccines triggered additional inflammatory responses via molecular mimicry. Id. at 34-36.

IV. Findings of Fact

The recitation of evidence above forms the foundation of this case. Having considered all of the evidence, the undersigned now presents his findings of fact.

A. Standards for Adjudication

A petitioner is required to establish her case by a preponderance of the evidence. 42 U.S.C. § 300aa–13(1)(a). The preponderance of the evidence standard requires a "trier of fact to believe that the existence of a fact is more probable than its nonexistence before [he] may find in favor of the party who has the burden to persuade the judge of the fact's existence." Moberly v. Sec'y of Health & Hum. Servs., 592 F.3d 1315, 1322 n.2 (Fed. Cir. 2010) (citations

omitted). Proof of medical certainty is not required. Bunting v. Sec'y of Health & Hum. Servs., 931 F.2d 867, 873 (Fed. Cir. 1991).

Distinguishing between "preponderant evidence" and "medical certainty" is important because a special master should not impose an evidentiary burden that is too high. Andreu v. Sec'y of Health & Hum. Servs., 569 F.3d 1367, 1379-80 (Fed. Cir. 2009) (reversing special master's decision that petitioners were not entitled to compensation); see also Lampe v. Sec'y of Health & Hum. Servs., 219 F.3d 1357 (Fed. Cir. 2000); Hodges v. Sec'y of Health & Hum. Servs., 9 F.3d 958, 961 (Fed. Cir. 1993) (disagreeing with dissenting judge's contention that the special master confused preponderance of the evidence with medical certainty).

Medical records generally warrant consideration as trustworthy evidence. Curcuras, 993 F.2d at 1528. However, because medical records are not always complete and accurate regarding a patient's condition(s), it may be appropriate for a special master to credit a petitioner's lay testimony to fill in gaps. Kirby v. Sec'y of Health & Hum. Servs., 997 F.3d 1378 (Fed. Cir. 2021). Nonetheless, special masters are expected to consider the record as a whole and determine how the evidence preponderates. See Britt v. Sec'y of Health & Hum. Servs., No. 17-1352V, 2021 WL 4282596, at *1-5 (Fed. Cl. Spec. Mstr. Aug. 27, 2021) (discussing the creation of and standards for evaluating medical records). Furthermore, special masters may assess the credibility of an individual offering testimony. Andreu v. Sec'y of Health & Hum. Servs., 569 F.3d 1367, 1379 (Fed. Cir. 2009).

B. Ms. Elson's testimony is generally not reliable

In addition to the medical records created contemporaneously with the hospital visits, the undersigned has also considered all of the affidavits and testimony provided by Ms. Elson. At times, the claims made by Ms. Elson are contradicted by the medical records. In other circumstances, the testimony is contradicted by other statements she has made. Ms. Elson also seems to have used hyperbole in some of her statements. Taken as a whole, the undersigned finds that Ms. Elson's testimony does not carry the burden of persuasion on various facts.

As acknowledged by Ms. Elson, "[i]t is really hard to remember things from so long ago[.]" Exhibit 71 at 4; see also exhibit 86 (affidavit in which Ms. Elson stated she could not remember various details). Here, it seems more likely than not that Ms. Elson's memories were shaped by information in the medical records, which she obtained years after the incidents in question. See Reusser v. Sec'y of Health & Hum. Servs., 28 Fed. Cl. 516, 523 (1993) (noting documentation recorded by a disinterested person soon after the event at issue is generally more

reliable than recollection of a party to a lawsuit many years later). Indeed, in the fifth affidavit, Ms. Elson amended testimony from her second affidavit. See exhibit 71 at 3 ("Reviewing the records of the visits from March 16, 2006 and April 25, 2006 has helped me to describe what I remember after each of those shots better"). This reliance on records, as opposed to an independent recollection corroborated by the medical records, tends to undermine her credibility as a fact witness. See Reusser, 28 Fed. Cl. at 523.

Ms. Elson made numerous statements that are in conflict with the medical records and that are contradicted by her own testimony. Examples are provided below to illustrate why it is difficult to credit her testimony.

In the fifth affidavit, filed on November 26, 2018, Ms. Elson recalled Mr. Hodge only began seeing Dr. Nasse after the 2006 vaccinations. Exhibit 71 at 3.[48] However, in the sixth affidavit, filed on February 3, 2021, Ms. Elson stated Dr. Nasse prescribed Mr. Hodge Adderall in September of 2004. Exhibit 86 at 11. Additionally, Dr. Nasse submitted a note indicating he no longer had records for Mr. Hodge. In that note, Dr. Nasse stated he saw Mr. Hodge "on + off for a year between 2000 & 2003." Exhibit 70. These conflicting remarks tend to suggest Ms. Elson's recollection of events is unreliable.

Another example of a dubious assertion made by Ms. Elson is that within six months of the 2006 vaccinations, Mr. Hodge "dropped to 90 pounds." Exhibit 19 at 1. This claim was later amended: "He weighed 160 pounds around August of 2006. By 2007 he weighed approximately 90 pounds." Exhibit 21 at 4. However, these claims are not supported by the existing medical records. The March 17, 2006 medical record from the Noble Clinic indicates Mr. Hodge weighed 159 pounds on the date of the first hepatitis vaccination. Exhibit 5 at 2. At the next hospital visit in April 2006, his weight was roughly comparable, at 155 pounds. Id. at 3. The next medical record was generated on June 2, 2006. Although Mr. Hodge's weight was not recorded here, the note indicates he was well nourished and well hydrated, and there are no notations that suggest otherwise. Exhibit 6 at 7. The medical record from August 23, 2006 states Mr. Hodge weighed 160 pounds. Exhibit 4 at 4. Though his weight was not recorded at the next visit on November 3, 2006, the review of systems indicates he was not experiencing weight loss. Exhibit 67 at 2. As noted above, there is a lack of medical records between November 3, 2006 and June of 2007. The next available medical record is from June 20, 2007, and it memorializes that Mr. Hodge was "a well-developed, well-

[48] The full quote is: "To the best of my recollection, Jeremy only saw him a couple times after the vaccines and not before the vaccines."

nourished male." Exhibit 65 at 5. The July 10, 2007 record from West Valley recorded that Mr. Hodge did not have a weight or appetite change problem. Exhibit 11 at 4. In light of these medical records, the undersigned is skeptical that Mr. Hodge experienced extreme weight loss (nearly 70 pounds) that went unnoticed by the doctors. It seems more likely that Ms. Elson was either misremembering or exaggerating a problem. This undercuts her credibility.

Furthermore, the third affidavit contains statements that seem incongruous with other statements within the affidavit. For example, she stated that "[i]f he wasn't riding his bike in front of cars on the street he was afraid to leave the house." Exhibit 21 at 4. At the same time, she stated "[m]ost days of the week, between 2006 and 2009, he would not come inside the house and I had to sleep outside in my car watching him." Id. It is difficult to reconcile these assertions. She also claimed Mr. Hodge "had no understanding" of what it meant when she told him to eat. Id. It seems more likely that Ms. Elson was using hyperbole when making some of these statements. These types of claims seem to exaggerate circumstances and makes it difficult for the undersigned to credit her testimony. See Heath v. Sec'y of Health & Hum. Servs., No. 08-86V, 2011 WL 4433646, at *5 (Fed. Cl. Spec. Mstr. Aug. 25, 2011) (declining to credit the testimony of a fact witness due, in part, to "a tendency to exaggerate"); Watson v. Sec'y of Health & Hum. Servs., No. 91-1354V, 1992 WL 42927, at *6 (Cl. Ct. Spec. Mstr. Feb. 18, 1992) (declining to credit testimony of a vaccinee's mother when the special master found "her susceptible to exaggeration, and really unsure about exactly what happened when").

Another example of unreliable testimony involves Ms. Elson's contention that Mr. Hodge began experiencing severe hallucinations during the summer of 2006. Exhibit 21 at 4. Dr. Baca's medical records from 2006 note Mr. Hodge denied any hallucinations. Exhibit 4 at 12. When asked about Dr. Baca's notation that Mr. Hodge denied hallucinations, Ms. Elson indicated that she probably stepped in, but the doctors ignored her complaint. Tr. at 215-16. According to Dr. Tornatore, a report of hallucinations constitutes a medical emergency. Tr. at 279-80. Thus, it seems unlikely that Dr. Baca would have ignored a report of hallucinations that came from Mr. Hodge or his mother. Cf. Tr. at 280, 404 (both discussing how doctors solicit histories from or about potentially delusional patients).

Furthermore, during the hearing, Ms. Elson recalled that Mr. Hodge was 14 or 15 years old on the camping trip in question, which would have been 2001 or 2002. Tr. at 193. At other times, Ms. Elson alleged the tick bit occurred in 2003. See, e.g., Pet'r's Post Hearing Br. at 4; exhibit 71 at 2. Even in this November 26,

2018 affidavit, Ms. Elson avers: "*I don't remember* when Jeremy had the tick bite that resulted in the bulls-eye rash on his leg, *but I think* it was shortly before we moved." Exhibit 71 at 2 (emphasis added). This assertion seems more like a guess.

To be clear, the undersigned does not intend to suggest that Ms. Elson testified with any intentional dishonesty. The circumstances in this case, especially in how her original counsel of record did (and did not) collect records, placed Ms. Elson in a difficult position of trying to describe events that occurred many years earlier. The flaws in Ms. Elson's testimony described above are set forth to explain why her testimony is not reliable. Because her testimony is not reliable, the undersigned cannot rest a finding of fact upon it. See Vaccine Rule 8(b)(1) (directing special masters to consider "reliable" evidence).

C. Mr. Hodge had OCD prior to 2006

There are no contemporaneous medical records establishing Mr. Hodge's OCD diagnosis in the years prior to the 2006 vaccinations. See infra section III.A; Resp't's Post Hearing Br. at 27. Records may have existed, but they were not filed and are unavailable. See, e.g., exhibit 72. Dr. Menzer's records from 2004 and 2005 do not mention OCD. See exhibit 3. Dr. Nasse could not produce his records, though in the brief note he provided many years later, he suggested he may have treated Mr. Hodge on and off for a year between 2000 and 2003 for "OCD". Exhibit 70 (quotation marks in original). This is insufficient to establish a diagnosis, as it provides no further information and the assertion of treatment between 2000 and 2003 is inconsistent with pharmacy records that show he prescribed Mr. Hodge Adderall and Risperdal in 2004. Exhibit 23.

However, there is some evidence suggesting Mr. Hodge developed OCD around age 16-17 (i.e. between 2003 and 2004). Though Dr. Nasse's note is not without issues, it does provide some support that Mr. Hodge had OCD prior to 2006. Ms. Elson testified that Mr. Hodge developed OCD symptoms after the camping trip in question, but the symptoms were not causing any problems with his school work. Exhibit 71 at 2 (affidavit). The earliest support in the available medical records comes from the March 17, 2006 visit to Dr. Rodriguez when Mr. Hodge received the first hepatitis vaccination. Exhibit 5 at 2. However, it seems this history was provided by Ms. Elson and does not reflect an independent assessment of Dr. Rodriguez.

Nonetheless, the Secretary concedes that Mr. Hodge had OCD prior to the 2006 vaccinations. See Resp't's Post Hearing Br. at 33. Because of this

agreement, the undersigned finds that persuasive evidence supports a finding that Mr. Hodge had OCD before he was vaccinated. See exhibit 5 at 2.

D. Although Mr. Hodge had Lyme disease in 2009, the evidence does not persuasively show Mr. Hodge had Lyme disease or neuroborreliosis prior to 2006 or prior to developing OCD

Ms. Elson argued that in 2003, Mr. Hodge was bitten by a tick carrying *B. Burgdorferi* and subsequently developed Lyme disease and neuroborreliosis. Pet'r's Post Hearing Br. at 4, 8, 48. This assertion was derived from Ms. Elson's fifth affidavit, which was filed on November 26, 2018. See exhibit 71. Ms. Elson's statement, made fifteen years after the alleged event, is as follows: "I don't remember when Jeremy had the tick bite that resulted in the bulls-eye rash on his leg, but I think it was shortly before we moved to [Canoga Park]. It was some time after the move when he started having OCD symptoms." Id. at 2. The move to Canoga Park was in the Spring of 2003. Exhibit 71 at 2. Accordingly, it became petitioner's position that Mr. Hodge was bitten by ticks and developed Lyme disease in 2003.[49]

Given the finding that Ms. Elson is not reliable in section IV.B, the undersigned cannot accept the assertion that Mr. Hodge was bitten by ticks during a camping trip in 2003 or that he developed Lyme disease in 2003.

Mr. Hodge did develop Lyme disease at some point. Indeed, some medical records in 2009 suggest a *B. Burgdorferi* infection. See exhibit 7 at 209 (discussing a *B. Burgdorferi* IgG IFA with a 1:80 titer, a borderline positive result), exhibit 7 at 21 (Dr. Mathisen opining a "possible Lyme disease" diagnosis), and

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[49] Ms. Elson did mention tick bites, a bull's-eye rash, and camping trips to Big Sur before the fifth affidavit. These topics were discussed in the second affidavit, but without specificity. She wrote: "While we do not know the exact trip where Jeremy likely contracted Lyme disease, we would go camping all the time at Big Sur, near my grandparents' house. There were always ticks on the pets, and there were a lot of deer and there were ticks on everything. On our last trip there was a large amount of ticks everywhere. In the sleeping bags and on the dogs. At the end of that trip Jeremy had a bulls-eye rash on his leg." Exhibit 19 at 1 (filed October 1, 2014). It is unclear as to what timeframe these statements refer. Indeed, Ms. Elson stated she did not know on which trip Mr. Hodge "likely" contracted Lyme disease. Id.

A medical record from 2009 also mentions possible tick exposure. Exhibit 7 at 44. However, this record does not contain any persuasive information about the time of the camping.

exhibit 13 at 4 (Dr. Clough assessing Mr. Hodge as likely having Lyme disease); c.f. exhibit 7 at 204 (noting subsequent western blot testing on June 18, 2009 was negative for *B. Burgdorferi* IgG) and exhibit 63 at 1 (inconclusive / negative serology tests in September 2009). The Secretary's expert indicated Mr. Hodge likely had Lyme disease by December 2009. Tr. at 442-43. Thus, the undersigned accepts this premise (that Mr. Hodge had Lyme disease in December of 2009), as it is undisputed.

However, a finding that Mr. Hodge suffered from Lyme disease in 2009 does not mean that Mr. Hodge suffered from Lyme disease six years earlier in 2003. The medical records discussing Lyme disease start in 2009. The only evidence supporting a Lyme disease diagnosis prior to 2006 is derived from statements made by Ms. Elson. Although Dr. Tornatore assumes Mr. Hodge had Lyme disease in 2003, the basis for that assumption comes from Ms. Elson's testimony. It is not wholly implausible that Mr. Hodge had Lyme disease before 2006. But, in light of the above findings, the undersigned cannot credit that assertion because it is not sufficiently persuasive.

As such, it is difficult to find that Mr. Hodge contracted Lyme disease in 2003 as opposed to some other year. He may have developed Lyme disease in 2006 or 2007, or earlier. However, it is the petitioner's burden to prove facts by the preponderance of evidence. Here, that burden has not been met.

V. Analysis

A. Explanation of petitioner's theory and Dr. Tornatore's opinion

Dr. Tornatore's complex opinion can be divided into a series of steps. First, Dr. Tornatore asserted that years before the vaccinations, Mr. Hodge contracted *B. Burgdorferi*. Pet'r's Post Hearing Br. at 28; Tr. at 22-23. This opinion derived from Ms. Elson's testimony that Mr. Hodge was bitten by a tick and developed a bull's-eye rash at around the age 14 or 15 (in 2003). Pet'r's Post Hearing Br. at 27. Dr. Tornatore also relied on Dr. Mathisen's assessment in reaching this conclusion. Petitioner also points to the May 19, 2009 MRI and the spinal tap results as support that Mr. Hodge suffered from neuroborreliosis. Pet'r's Post Hearing Br. at 27-28.

From a starting point that Mr. Hodge suffered from Lyme disease years before the vaccination, Dr. Tornatore made additional assumptions about Mr. Hodge's condition. In Dr. Tornatore's version of events, the spirochete took up residence in Mr. Hodge's nervous system and caused persistent inflammation as the immune system attempted to eradicate the spirochete. Then, the persistent infection or immune activation resulting from the infection manifested as OCD.

Pet'r's Post Hearing Br. at 28-29; Tr. at 22-23. Dr. Tornatore testified that the first evidence of neuroborreliosis was Mr. Hodge's initial presentation of OCD. Id.; Tr. at 23. Petitioner further maintains that Mr. Hodge's Lyme-induced OCD was relatively mild. Pet'r's Post Hearing Br. at 30.

These assertions and assumptions about Mr. Hodge's health before the vaccination are the foundation for the remainder of Dr. Tornatore's opinion. Dr. Tornatore opines that the hepatitis B vaccines significantly aggravated Mr. Hodge's OCD. The mechanism is molecular mimicry. Id. at 48, 52-57.

B. Dr. Tornatore's assumption of facts is incongruous with the fact findings

The factual assertions upon which Dr. Tornatore relies are inconsistent with the facts that the undersigned determined to be more likely than not true. The primary unsubstantiated assumption concerns when Mr. Hodge developed Lyme disease. A lesser unsubstantiated assumption is that Mr. Hodge's OCD before the vaccinations in 2006 was mild. In light of the fact finding, there is not preponderant evidence to show Mr. Hodge developed Lyme disease before 2009. As such, Dr. Tornatore's opinion cannot be credited. However,

Numerous cases in the Vaccine Program have recognized that a special master may reject the opinion from an expert that assumed a set of facts not supported by the record. Among these cases, a leading precedent is Burns v. Sec'y of Health & Hum. Servs., 3 F.3d 415, 417 (Fed. Cir. 1993).

In Burns, the vaccinee's mother alleged that her son, Ryan, became fussy and did not want to eat after his first DPT vaccine, and began to experience staring spells and excessive drooling the day after the second DPT vaccination. Burns v. Sec'y of Health & Hum. Servs., No. 90-953V, 1992 WL 365410, *2 (Fed. Cl. Spec. Mstr. Nov. 6, 1992). Ms. Burns testified Ryan's behavior changed dramatically following the second DPT vaccination, but the alleged symptoms were not corroborated by the contemporaneous medical records. Id. Ryan received his third DPT shot a few months later. Ryan's next hospital visit was a few months later and the records from that visit did not document staring spells or possible seizures. Nearly a year later, Ryan was hospitalized, which was the first medically documented seizure episode. Id. at *3. He received a fourth DPT vaccine a few months later and Ms. Burns testified he had a high fever. Id. at *4. The petitioner's expert assumed Ryan's seizures started the day after his second DPT vaccine and was exacerbated by the fourth shot. Id. at *6. However, the special master discounted the expert's opinion, which was largely reliant on Ms.

Burns's testimony, after finding Ms. Burns's testimony was contradicted by multiple contemporaneous medical records. Id. at *6-7.

The Federal Circuit held that the special master did not err by accepting the contemporaneous medical records over the testimony of a fact witness. Burns, 3 F.3d at 417. In reaching this conclusion, the Federal Circuit recognized that the petitioner presented inconsistent affidavits and professed to the difficulties of remembering specific dates from events that happened long ago. Id.

Moreover, the Federal Circuit also ruled that the special master did not err in rejecting the opinion from the expert the petitioner had retained. The Federal Circuit explained: "The special master concluded that the expert based his opinion on facts not substantiated by the record. As a result, the special master properly rejected the testimony of petitioner's medical expert." Id.

Special masters have followed Burns and its reasoning in multiple cases. Examples include: Kreizenbeck v. Sec'y of Health & Hum. Servs., No. 08-209, 2018 WL 3679843, at *32 (Fed. Cl. Spec. Mstr. June 22, 2018) ("Dr. Boles placed too much emphasis on Mrs. Kreizenbeck's uncorroborated allegations of C.J.K.'s vaccine reaction in opining that proof of exacerbation was established, further diminishing the reliability of his opinion"), mot. for rev. denied, 141 Fed. Cl. 138 (2018), aff'd on non-relevant ground, 945 F.3d 1362 (Fed. Cir. 2020); Hirmiz v. Sec'y of Health & Hum. Servs., No. 06-371V, 2014 WL 4638375, at *8 (Fed. Cl. Spec. Mstr. Aug. 26, 2014) (finding an opinion from petitioners' expert, Dr. Oleske, was unpersuasive because he "based his opinion on a plainly flawed assumption as to the time of onset of J.H.'s neurological symptoms"), mot. for rev. denied, 119 Fed. Cl. 209, 217 (2014), aff'd without opinion, 618 Fed. App'x 1033 (Fed. Cir. 2015); Milik v. Sec'y of Health & Hum. Servs., No. 01-064V, 2014 WL 6488735, at *16 (Fed. Cl. Spec. Mstr. Oct. 29, 2014) ("Dr. Souayah based his testimony on a clearly flawed assumption as to the time of the onset of A.M.'s neurological dysfunction, his causation opinion can be readily dismissed for that reason alone."), mot. for rev. denied, 121 Fed. Cl. 68, 84 (2015), aff'd, 822 F.3d 1367, 1381 (Fed. Cir. 2016).

Notably, in each of those cases, an appellate authority agreed with the reasoning of the special master. In a non-precedential opinion, the Federal Circuit stated that the special master correctly relied upon a Supreme Court opinion, Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 242 (1993), for the proposition that "[w]hen an expert assumes facts that are not supported by a preponderance of the evidence, a finder of fact may properly reject the expert's opinion." Dobrydnev v. Sec'y of Health & Hum. Servs., 556 Fed. App'x 976, 982-93 (Fed. Cir. 2014).

Ms. Elson's case is comparable to those cases in that she has not established the predicate assumptions underlying an expert's opinion. Without the necessary showing, analyzing other aspects of the expert's opinion is unnecessary. For example, Dr. Tornatore's opinion presupposes that Mr. Hodge suffered from Lyme disease before he was vaccinated in 2006.[50] But, determining whether preponderant evidence supports Ms. Elson's argument that a hepatitis B vaccine can aggravate Lyme disease (Althen prong 1 / Loving prong 4) would be an entirely hypothetical construct. See Lombardi v. Sec'y of Health & Hum. Servs., 656 F.3d 1343, 1353 (Fed. Cir. 2011) (stating in a causation-in-fact case, that the Vaccine Act "places the burden on the petitioner to make a showing of at least one defined and recognized injury").

VI. Conclusion

The undersigned does not doubt that Ms. Elson and Mr. Hodge have had a difficult decade. The records demonstrate that Mr. Hodge has suffered severely, and that Ms. Elson has cared for her son during trying times.

However, petitioners bear the burden of proving facts in order to demonstrate entitlement. Here, for the above stated reasons, the evidentiary record does not sufficiently show certain predicate facts. Without the predicate facts to support her claim, Ms. Elson has failed to prove entitlement.

The Clerk's Office is instructed to enter judgment in accord with this decision unless a motion for review is filed. Information about filing a motion for review, including deadlines, is available through the Vaccine Rules, found on the website of the Court of Federal Claims.

IT IS SO ORDERED.

s/ Christian J. Moran
Christian J. Moran
Special Master

[50] While the evidence supports a finding that Mr. Hodge suffered Lyme disease in *2009*, there is not preponderance evidence that Mr. Hodge suffered Lyme disease in *2006*.