

CROSS EXAMINATION OF THE DEFENSE LIFE EXPECTANCY EXPERTS: DRS. STRAUSS AND SHAVELLE



WILLIAM JACOBSON

The author is a partner at the Cleveland Law Firm of Nurenberg, Paris, Heller & McCarthy Co., L.P.A. He can be reached at wjacobson@nphm.com. In preparing for Dr. Shavelle's deposition, and in navigating the labyrinth of obstacles to comprehension created by Drs. Strauss and Shavelle, he was assisted by Josh Feldman, a forensic accountant with an actuarial background. Mr. Feldman can be reached at joshfeldman@netscape.net.

Drs. David Strauss and Robert Shavelle are commonly utilized by the defense as "life expectancy experts" in birth trauma cases. These gentlemen have Ph.D.s in Applied Statistics and operate an organization in California known as the "Life Expectancy Project." They claim that they are able to compute life expectancy utilizing a scientific method based upon a statistical analysis of data, as opposed to the medical knowledge and experience of a pediatric neurologist. Of course, with the advent of tort reform and the necessity of greater reliance on economic loss in the proof of damages, it is of paramount importance to the defense to show a substantially diminished life expectancy in the birth-injured plaintiff.

By way of background, Dr. Shavelle was deposed recently in the case of *Evans v. MetroHealth Medical Center*¹ and testified that about 90% of his deposition testimony is rendered on behalf of a defendant.² Dr. Shavelle also spoke in June, 2012, at a seminar entitled "Preventing, Managing and Defending against Claims of Obstetric Malpractice."³

Back in the 1990s, the Life Expectancy Project was doing more plaintiffs' work than it is now.⁴ It appears to the author that the literature authored by Drs. Strauss and Shavelle during that time period was suggestive of longer life expectancies in the birth-injured plaintiff than they are now willing to concede. For example, in 1997, Dr. Strauss published an article entitled "Tube Feeding and Mortality in Children with Severe Disabilities and Mental Retardation."⁵ In that article, Dr. Strauss makes the statement:

... when study variables were controlled in a multivariate analysis, feeding tube use was associated with no identifiable increase in mortality among children with very severe disabilities.⁶

Today, Strauss and Shavelle rely heavily on the necessity of tube feeding as a factor which they claim diminishes life expectancy.

Most of the literature authored by Strauss and Shavelle is referenced on their website;⁷ however, some of their literature with plaintiff-favorable references is no longer available on that website.⁸ For example, Dr. Shavelle authored an article in the 1990s entitled "Life Expectancies of Children with Cerebral Palsy Better than Often Thought,"⁹ but this article and another plaintiff-friendly article entitled "Life Expectancy in the Birth-Injured Plaintiff" are no longer available on the website.¹⁰

Up until five to seven years ago, Drs. Strauss and Shavelle utilized raw data to calculate the life expectancy of a child with cerebral palsy in a medical-legal matter.¹¹ They do not appear, however, to have utilized raw data for the same calculations at all in the last four to five years; according to Dr. Shavelle he has not (the author has inferred from Dr. Shavelle's comments that calculations and medical-legal matters are handled uniformly by other members of the Life Expectancy Project).¹² The raw data was collected by the California Department of Developmental Services between 1980 and 1995.¹³ Each person in the database had an annual evaluation using a form called the "Client Development Evaluation Report" (abbreviated "CDER").¹⁴ From this database, Strauss and Shavelle extracted a database of 12,709 children with cerebral palsy.¹⁵

The analysis was done as follows: Strauss and Shavelle would identify the four or five cohort groups into which they felt each of the children fit best, *i.e.*, tube fed, could not roll over, severe cognitive issues, *etc.* Once those assumptions were made – *i.e.*, the individuals were placed in their respective cohort groups – the rest of the analysis regarding life expectancy, at least through age 15, was based on an assessment of the

cohort group into which the individual had been placed.¹⁶

Strauss and Shavelle thereafter began to encounter problems with the use of raw data. In some of the “lost” plaintiff-oriented literature that they had produced in the 1990s, Strauss and Shavelle had recommended that plaintiff’s counsel should request all documents and data from which the life expectancy had been derived.¹⁷ When people began to request the database, it was refused. The turning point may have been a case in Alaska, occurring sometime in the past five or ten years, where Dr. Shavelle was ordered to produce his database. Rather than do so, he withdrew his original report and submitted a revised report in that matter, which did not rely on raw data.¹⁸ Thus, despite the fact that, in the 1990s, Drs. Strauss and Shavelle had recommended the use of raw data to determine life expectancy,¹⁹ this method was abandoned when plaintiffs’ counsel began requesting their data.

The reasons why this was done are not clear. It may simply have been that Strauss and Shavelle had some proprietary interest in that data, which they deny, and simply refused to make it available to the general public as it would be relatively easy for other statisticians to duplicate their analysis. It may have been that the cohort analysis was relatively simple to attack, as one would argue that their client either did not fit into the cohort groups arbitrarily assigned by Strauss and Shavelle, or, conversely, that Strauss and Shavelle had failed to identify other cohort groups with positive factors; or it may simply have been that the life expectancies they were generating were not, in reality, reflective of what the raw data demonstrated.

The methods utilized by Strauss and Shavelle today do not utilize raw data. Strauss and Shavelle claim to have incorporated the raw data into an article,²⁰ and now they compute the life expectancy from the article rather than from the database on which the article is based. This cagey approach has allowed Strauss and Shavelle to continue to claim that the life expectancies are scientifically drawn from data, without having to produce the data. The problem is that there is no one outside of the Strauss, Shavelle group that has

verified that the information presented in this article is an accurate reflection of the database.²¹ No one outside the group has recreated the process.

What Strauss and Shavelle do now is to compute life expectancies of cerebral palsy victims through an analysis of the information they claim to have derived from raw data and assimilated on their own. Shavelle concedes, however, that most statisticians are probably not involved in collecting data themselves.²² Shavelle concedes further that, in terms of the reliability of the results, there are some inherent safeguards in the method whereby statisticians analyze data gathered by others.²³

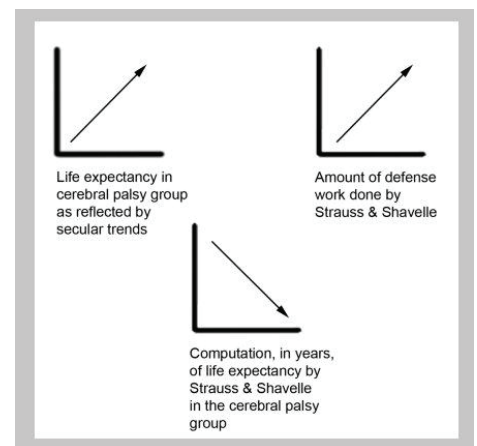
So Strauss and Shavelle have been able to continue to indirectly use the database, through this article, and have never turned over the database despite multiple requests.²⁴

But the area where Strauss and Shavelle have succeeded best in putting up road blocks to counsel delving into their analysis is in situations where the child’s life expectancy exceeds the fifteen years of data gathered by the California Department of Developmental Services. In order to do these calculations, Strauss and Shavelle have utilized complex methods of extrapolation which are well beyond the comprehension of most lawyers (including the author). They started by utilizing the “Log-Linear Declining Risk Ratio” method or “LDR.”²⁵ There are certain assumptions that one needs to make in order to utilize this method, including the convergence point, or “parity age,” at which the life expectancy of the general population will converge with the life expectancy of the cerebral palsy group. Strauss and Shavelle began using age ninety as the parity age. Then for no particular reason, other than they thought it was a “better fit for the empirical data,” Strauss and Shavelle ceased using ninety as the parity age and began using 100 instead.²⁶ When the parity age is changed from ninety to 100, the life expectancy one is generating goes down.²⁷

But Strauss and Shavelle were not satisfied with just that method of lowering life expectancy. Despite their 2005 article in which Strauss and Shavelle claimed that the LDR was a superior method in computing

life expectancy in the cerebral palsy group, as opposed to other methods,²⁸ including the constant proportional life expectancy (“PLE”), sometime in the past few years the Strauss and Shavelle group have gone to the PLE which generates an even lower life expectancy.²⁹

Strauss and Shavelle will concede that there has been a secular trend towards increase in life expectancy in those afflicted with cerebral palsy in the last 20-30 years.³⁰ Despite that, it appears to this author that they arbitrarily select methods of extrapolation, with each successive method resulting in a lower life expectancy than the prior method. It would thus appear that the following graphs could prove useful as demonstrative evidence when cross-examining either Dr. Strass or Dr. Shavelle:



What the author found perplexing, upon the questioning of Dr. Shavelle in his deposition, was Dr. Shavelle’s explanation for these successive changes, a constant refrain of “it was a better fit for the empirical data.”³¹ The source of confusion, of course, was the identity of the “empirical data” upon which Dr. Shavelle was relying. Upon persistent cross examination, however, Dr. Shavelle grudgingly revealed that his database from the California Department of Developmental Services was updated a few years ago and that he now has an additional 15 years of information from 1995 until 2010.³²

So what Strauss and Shavelle have been doing is utilizing these complex methods of extrapolation, i.e., LDR, PLE, etc., even though they actually have the data and there is no need to extrapolate. Of course,



“... it appears to this author that [Drs. Strauss and Shavelle] ... continue arbitrarily to select methods of calculation, with each successive method resulting in a lower life expectancy than the prior method.”

Strauss and Shavelle refuse to release the additional information as they claim they are not relying on it, but, rather, rely on the methods of extrapolation instead. Their justification, however, for relying on those methods of extrapolation, *i.e.*, that they appear to be a “better fit for the empirical data,” inherently utilizes the additional information which should thus be discoverable.

Finally, Strauss and Shavelle steadfastly refuse to concede that favorable economic factors (*i.e.*, a plaintiff’s verdict) will result in an increase in life expectancy in a victim of cerebral palsy. There is, however, literature to the contrary which is cited and discussed in Strauss and Shavelle’s own literature.³³ Strauss and Shavelle’s own literature will thus provide a vehicle for the opposing viewpoint to be presented to the jury.

Dr. Shavelle, however, despite being named as a defense expert, and deposed, did not testify at trial.

2. The deposition of Dr. Shavelle in the *Evans* case is available in the TrialSmith. *Evans* depo. at 9, 10.
3. *Evans* depo. at 8; see also www.americanconference.com/2012/721/obstetric-malpractice/speakers
4. *Evans* depo. at 10.
5. *Pediatrics*, Vol. 99, No. 3, March 1997, 358-362.
6. *Id.*, at 358.
7. www.lifeexpectancy.org
8. *Evans* depo. at 35.
9. *Evans* depo. at 35.
10. The article entitled “Life Expectancy in the Birth-Injured Plaintiff” has been forwarded to the AAJ and OAJ data banks; the article entitled “Life Expectancies of Children with Cerebral Palsy Better than Often Thought” was unavailable to the author.
11. *Evans* depo. at 22.
12. *Evans* depo. at 48, 49.
13. *Evans* depo. at 84.
14. *Evans* depo. at 84.
15. *Evans* depo. at 84.
16. *Evans* depo. at 106, 107.
17. See “Life Expectancy in the Birth Injured Plaintiffs,” n. 10, *supra*.
18. *Evans* depo. at 51.
19. *Evans* depo. at 22.
20. “Life Expectancy of Children with Cerebral Palsy”, *Pediatric Neurology*, 18:143-149 (1998).
21. *Evans* depo. at 83.
22. *Evans* depo. at 97.
23. *Evans* depo. at 98.
24. *Evans* depo. at 92.

25. “Estimation of Future Mortality Rates and Life Expectancy in Chronic Medical Conditions,” *Journal of Insurance Medicine* 2005; *J INSUR. MED.* 2005; 37:20-341.
26. *Evans* depo. at 57; “Life Expectancy in Cerebral Palsy: An Update,” *Developmental Medicine and Child Neurology* 2008, 50:487-493 (see page 492 subpart 1(c)).
27. *Evans* depo. at 57, 58.
28. See “Estimation of Future Mortality Rates and Life Expectancy in Chronic Medical Conditions,” *J INSUR. MED.* 2005; 37:20-34.
29. *Evans* depo. at 120-123.
30. *Evans* depo. at 65.
31. *Evans* depo. at 126.
32. *Evans* depo. at 117.
33. “Economic Factors and Longevity in Spinal Cord Injury: a Reappraisal,” *ARCH. OF PHYS. MED. AND REHAB.*, 89:572-574.

Endnotes

1. *Nala Evans v. MetroHealth Medical Center*, Cuyahoga County Case No. CV 10 743890. This case went to trial in Cuyahoga County, Ohio in August, 2012 and resulted in a plaintiffs’ verdict;

20 years.

150 experts.

30,000 cases.

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