March 6, 2009

Actuarial Cost Estimate: Montana Senate Bill 234

An Act Requiring Insurance Coverage for Autism Spectrum Disorders

OLIVER WYMAN

Prepared By:

Marc Lambright, FSA, MAAA

MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

Contents

1

Background

Oliver Wyman Actuarial Consulting, Inc. (Oliver Wyman or we) has been engaged by Autism Speaks to develop a cost model in order to analyze and estimate the impact of mandated insurance benefits for Autism Spectrum Disorders (ASD) on insurance premiums. As part of this work, Oliver Wyman has developed a range of independent estimates of the impact on insurance premiums for the benefits mandated by Montana Senate Bill 234 (SB 234) which provides coverage for the diagnosis and treatment of autism spectrum disorders for covered dependent children. Note this revised report is based on the current bill, and supersedes our report dated February 19, 2009 which was based on a previous version of the bill.

Oliver Wyman is a part of the Marsh & McLennan (MMC) family of companies. With over 60 members of the American Academy of Actuaries, Oliver Wyman is one of the largest actuarial practices in North America. Oliver Wyman's health practice, which has twelve credentialed actuaries, advises insurers, regulators, governments, interest groups, and others.

This report, along with its supporting analysis, was developed by Marc Lambright, a Principal and consulting health actuary in Oliver Wyman's Philadelphia office. Marc is a Fellow of the Society of Actuaries and a member of the American Academy of Actuaries and is professionally qualified to analyze the cost impact of SB 234 and provide the estimates shown in this report. As part of Oliver Wyman's quality assurance process, the underlying analysis and this report were independently peer reviewed by another credentialed Oliver Wyman actuary.

2

Scope and Limitations

The intent of this analysis is to provide a reasonable range of estimates for the insured costs of the mandated ASD benefits provided for in SB 234 and the associated premium impact on the markets affected by SB 234. This analysis makes no attempt to quantify potential offsetting cost savings associated with successful ASD treatment, nor does it include the any estimate of the potential reduction in other government expenditures associated with providing ASD services that might overlap with the benefits provided by this mandate. Therefore, the reader is cautioned that this report should only be considered a cost analysis, and not be misconstrued as a cost-benefit analysis when assessing the merit of SB 234.

We note that cost estimates for autism mandates have varied widely state to state, based on differences in the state specific mandates and the methods and assumptions used in the estimating costs, though typically independent estimates show premium increases due to mandated autism benefits of less than 1%. The reason for this variability is that the largest component of the increase in costs under the SB 234 mandated ASD benefits is for Applied Behavior Analysis (ABA) and similar behavioral therapies, which are almost universally excluded from health coverage, and therefore essentially no insured data exists for use in developing credible utilization and unit cost estimates for ABA.

The reader is cautioned that the ultimate cost of covering ABA benefits is uncertain; however, this analysis attempts to reflect the likely behavior of consumers, providers and insurers of ABA services in developing the assumptions underlying the cost estimates. Likewise, the additional costs for mandated medical services other than ABA are uncertain. Insurance policies often cover some services for children diagnosed with an ASD, although the mandate could cause the costs for certain services to increase because ASD exclusions are common, and certain services that previously may have been denied or terminated following utilization review might be covered due to the mandate.

3

Description of Key SB 234 Provisions and their Impact on Covered Benefits

Insurance Markets Covered by Mandate

New Section 1 (1) states: *Each group disability policy, certificate of insurance, or membership contract that is delivered, issued for delivery, renewed, extended, or modified in this state must provide coverage for diagnosis and treatment of autism spectrum disorders for a covered child 18 years of age or younger.*

The bill mandates coverage of ASD services for commercial group markets which include the small group (2-50 employees) and the large group (51+ employees) markets.

Covered Benefits

Treatment includes: *(i) habilitative or rehabilitative care that is prescribed, provided, or ordered by a licensed physician or licensed psychologist, including but not limited to professional, counseling, and guidance services and treatment programs that are medically necessary to develop and restore, to the maximum extent practicable, the functioning of the covered child; (ii) medications prescribed by a physician licensed under Title 37, chapter 3; (iii) psychiatric or psychological care; and (iv) therapeutic care that is provided by a speech-language pathologist, audiologist, occupational therapist, or physical therapist licensed in this state.*

The inclusion of applied behavior analysis (ABA) in the definition of *habilitative or rehabilitative care* is especially important. The coverage of ABA has the most significant impact on cost of any mandated service. ABA programs are marked by intensive therapy that may include 30-40 hours of therapy a week under the most intensive programs, though many programs would not utilize that level of resources. Key assumptions underlying our ABA cost estimates are outlined in Section 5.

Annual Benefit Maximum Benefit

The maximum benefit is $50,000 for a child 8 years of age or younger; and $20,000 for a child 9 years of age through 18 years of age. The annual coverage maximum is important as it has the effect of capping costs for the heaviest users of ASD services. From a practical standpoint, this would generally apply to young children whose therapy includes an intensive ABA program.

Medical Necessity and Treatment Review

The bill does allow for utilization review by specifically stating: *When treatment is expected to require continued services, the insurer may request that the treating physician provide a treatment plan consisting of diagnosis, proposed treatment by type and frequency, the anticipated duration of treatment, the anticipated outcomes stated as goals, and the reasons the treatment is medically necessary. The treatment plan must be based on evidence-based screening criteria.*

This is important as insurers will develop protocols to review treatments and manage care which will limit unnecessary treatments if reviews are done appropriately.

4

Modeling Methodology

The following outlines the general modeling methodology used to develop the cost estimates. Estimates were developed both on a per member per year basis, and as a percentage of average annual premiums as shown in Section 6. Details of key assumptions are discussed in Section 5 and illustrated graphically in the exhibits shown in Appendix 1.

Modeling Perspective

In general, the model was developed to produce costs under the assumption that sufficient providers would be available to meet the demand for autism services, especially with regard to ABA services. It also assumes that there would be sufficient awareness of autism and motivation (primarily by parents) to seek treatment so that the diagnosis and treatment of ASDs would be more in line with CDC prevalence estimates. We would expect that it would take at a minimum several years for both the supply of providers to meet the demand for mandated ASD services and for parents of autistic children to aggressively seek diagnosis and treatment of their children's disorders.

In spite of these real limitations that will likely limit short-term costs associated with mandated autism benefits, we feel that it is appropriate from a public policy perspective to look at the costs from a longer term perspective and assume that both awareness of ASDs will increase and that supply and demand for ASD services would eventually be in balance. We have developed our estimates with this in mind.

In the near term we would note that the supply of ABA service providers, specifically credentialed Board Certified Behavior Analysts (BCBAs) and Board Certified Associated Behavior Analysts (BCaBAs) would not be sufficient to meet the demand for ABA programs if ABA benefits are mandated. There are currently about 3[1] certified BCBAs and BCaBAs in Montana, which translates to approximately one therapist per 318

[1] BACB Certificant Registry: http://www.bacb.com/cues/frame_about.html, accessed January 2009.

children 18 and under treated for ASD in Montana based on the prevalence and age at diagnosis assumptions outlined in this report. While it is true that not all autistic children will have an ABA program, it is also true that behavioral analysts provide services to individuals other than autistic children. It is reasonable to conclude that demand for ABA services, at least initially, would far exceed supply should health care coverage similar to that mandated by SB 234 become typical. Therefore, the long-term estimates shown in this report should not be used as a basis for trying to determine the near-term cost impact of the mandated benefits.

In trying to ascertain the near-term impact of SB 234, it is also instructive to look at some of the limited evidence available related to actual costs of ABA mandated benefits in other states. Aetna noted in December 2008 that it had tracked the cost of the autism mandate in Texas for its first year of existence and found that it increased costs for policyholders who filed autism-related claims by $379 a month. A total of 235 policy holders had filed autism claims in the state as of the time the data was released. At that time, the company had not decided whether to pass those costs on to the policyholders because the cost of the mandate might change after the first year.[2] While this is only first year experience for a single insurer, it illustrates that initial mandate costs are likely low. Aetna's Texas block of business is quite large (approximately $1.5 - 2.0 billion in premium[3]), so the statistics provided indicate a mandate cost of less than 0.1% of premium. This experience is likely not atypical of experiences in other states.

General Modeling Process

The modeling process employed to develop our cost estimates was as follows:

1. Assumed treated prevalence for the United States is 1 in 150 based on the CDC's estimate of ASD prevalence in the United States. For Montana, we decreased this treated prevalence rate by 25% based on the fact that the percentage of children under 10 in Montana reported with autism in Individuals with Disabilities Education Act (IDEA) Part B child count[4] data is approximately 0.15% which is about 36% of the United States average. Note we capped the reduction at 25%. These child counts should be a reasonable indicator of the relative likelihood of children receiving medical treatment for ASD in different states.
2. Prevalence rates by diagnostic subtype (autistic disorder, PDD-NOS, Asperger's Syndrome) were estimated separately as diagnosis patterns and service utilization could reasonably be expected to vary by diagnostic subtype.

[2] Lawmaker: Oklahoma autism bill has momentum. Associated Press. December 4, 2008. http://newsok.com/article/3327594 accessed January 2009.

[3] NAIC Annual Statements for 2007.

[4] IDEA Part B database. http://www.ideadata.org/PartBChildCount.asp. Accessed January 2009.

3. The percentage of children diagnosed by age for each diagnostic subtype was estimated so that the average age of diagnosis implicit in the modeling is consistent with publicly available age at diagnosis statistics.[5]
4. The percentage of diagnosed children who could be expected to have an ABA program was estimated for each age based on assumptions regarding how many children would start a program and typical program continuance.
5. A distribution of the number of annual hours for an ABA program was developed based on ABA provider input and an assumption that utilization review by insurers would impact utilization to some degree.
6. Based on the assumed treatment prevalence, likelihood of having an ABA program, assumed distribution of ABA program hours, and estimated ABA program cost per hour of therapy, ABA cost estimates by age were developed and adjusted to reflect the impact of the annual $50,000 (for ages 0 to 8) and $20,000 (for ages 9 to 18) caps.
7. Non-ABA costs were estimated based upon studies of medical costs for ASD children and judgment regarding the increase in costs that could be expected due to the mandated benefits.
8. Based on Census demographic data and the cost estimates for mandated ASD services by age as outlined in 1-7 above, an annual cost per covered individual was developed.
9. The cost of services was increased to reflect administrative and other insurer costs or profit charges.
10. The estimated size of the covered market was developed based on Census, Medical Expenditure Panel Survey (MEPS) enrollment and premium information for Montana, and Kaiser Family Foundation coverage data. These assumptions are further documented in the following section.
11. The cost of the mandated services per covered person and as a percentage of premiums were calculated based on the model cost estimates and market data.

[5] IAN database. http://dashboard.ianexchange.org/StateStatsAdvanced.aspx?A1=VA&ADU=T. Accessed January 2009.

5

Summary of Key Assumptions

Key assumptions underlying the cost estimates for the mandated benefits are summarized in this section. Appendix 1 further illustrates these assumptions.

Treated Prevalence and Age at Diagnosis

Overall treated prevalence is based on the 2007 CDC[6] study estimating United States ASD prevalence of 1 in 150 adjusted downward by 25% due to reported autism rates per IDEA Part B child count data being significantly lower in Montana than for the country as a whole. Prevalence by diagnostic subtype was estimated based on an academic study published in the American Journal of Psychiatry[7].

As noted in the previous section, the percentage of children diagnosed by age for each diagnostic subtype was estimated so that the average age of diagnosis implicit in the modeling is consistent with publicly available age at diagnosis statistics.

The base model treated prevalence and age at diagnosis assumptions for Montana are shown below:

	Montana Prevalence	
Diagnostic Subtype	**Ultimate Prevalence**	**Average Age of Diagnosis**
Autistic Disorder	1 in 600	3
PDD-NOS	1 in 400	3
Asperger's	1 in 1200	6
All ASD	**1 in 200**	

[6] Centers for Disease Control. Morbidity and Mortality Weekly Report. February 9, 2007.

[7] Fombonne, E. and S. Chakrabarti. American Journal of Psychiatry. June 2005.

ABA Program Utilization and Cost

ABA Program Utilization by Age

ABA programs require a significant commitment from affected children, as well as their families. It is likely that a significant number of ASD children will not have an ABA program regardless of the availability of a provider, and many others diagnosed with ASD, especially those in more rural areas, may have difficulty accessing a provider. For this reason, we have assumed that 40% to 66.7% (40% for "Low" scenario, 50% for "Middle", and 66.7% for "High") of diagnosed children under age 6 will begin an ABA program. Based on discussions with ABA providers and researchers, actual utilization of ABA programs has been lower in many cases due to the lack of providers, the lack of coverage, and to some extent the limited understanding of ABA programs and their efficacy.

In Minnesota, a state that is widely regarded as having some of the most extensive ABA coverage and services in the nation, provider data indicates ABA utilization of approximately 20% of diagnosed three to six year olds[8], which is considerably lower than assumed in each of the scenarios in our modeling. While our range of assumptions for ABA utilization may appear conservative, and likely is conservative in the near-term, we feel that the range is reasonable since insurers will likely have some conservatism in their cost estimates and premium rates. Private insurance utilization will also likely be higher than under the public/private programs in Minnesota, and utilization could increase over time due to increased awareness of ASD, and potentially an increased supply of ABA providers.

ABA programs are generally geared towards addressing deficits in younger children and are generally not intended to be continued indefinitely. For this reason, we have assumed that no programs would terminate prior to school age, that a large percentage of ABA programs would terminate at ages six and seven when an autistic child could be expected to enter elementary school, and thereafter a large percentage of programs would terminate annually until only a very small percentage of children have ABA programs in their teenage years. Programs would be expected to terminate if a child has experienced sufficient progress so that a program is no longer necessary or if the insurer or family sees no progress, as well as for other reasons.

[8] Discussion with Dr. Eric Larsson Executive Director, Clinical Services, The Lovaas Institute for Early Intervention Midwest Headquarters regarding ABA utilization research in Minnesota. February 2009.

The assumed percentage of children diagnosed with ASD that have an ABA program is shown in the table below:

	% of Diagnosed Children w/ ABA
Under 6	50.0%
6	37.5%
7	25.0%
8	16.7%
9	11.1%
10	7.4%
11	4.9%
12	3.3%
13 to 18	2.5%

ABA Program Annual Number of Hours

In developing the assumed annual ABA program hours, we discussed typical ABA programs with ABA providers, and reviewed some benefit materials from one of the few large self-insured employers who offer ABA benefits[9]. For three age bands, we developed a distribution of expected hours that resulted in the annual averages shown in the table below.

	Average ABA Program Hours
Ages Under 8	1,500
Ages 8 to 12	671
Ages 13 to 18	401

The general assumption is that pre-school aged children will have programs for 20 to 40 hours a week, averaging about 30 hours a week. This time will be reduced by over half by age eight when children would be expected to be in school and the school system would be required to provide services during the school day, and then again would be reduced significantly at age 13 as the child ages and ABA programs would be expected to be less time consuming and address a smaller number of behavioral deficits.

Cost per Hour of ABA Service

In developing the costs per hour, we reviewed ABA program staffing information and ABA provider wage and overhead cost assumptions. We developed an average cost for the entire United States and then adjusted this for Montana, based on the relative health care wages in Montana versus the entire United States developed from the Bureau of Labor Statistics[10] health care wage data. The resulting average cost per hour of ABA therapy in Montana is $38.61.

[9] Autism Therapy Reference- Microsoft Corporation (administered by Premera Blue Cross).

[10] BLS wage data. http://www.bls.gov/guide/geography/wages.htm accessed January 2009.

Other (than ABA) Medical Costs

Based on several studies[11], we estimated that children with ASDs had costs approximately three times the average for non-inpatient medical services under current benefit programs. While some medical services are provided to children diagnosed with ASD, it is likely that the mandate would mean that some services that an insurer could currently deny or exclude would now be covered. In our base estimate, we assumed that the mandate would result in additional average insured medical costs equal to 50 to 100% (varied for "Low", "Middle", "High" scenarios) of the estimated cost of covered non-inpatient services, or an additional $1,950 to $3,900 per diagnosed child, per year. The actual costs could vary significantly by child, with certain children receiving more intensive and costly services, and other children receiving no or few additional services due to the mandate.

The estimated annual cost for additional non-ABA services (note many non-ABA medical services are already provided to individuals with ASD) that would be covered as a result of the mandate are shown for each cost scenario in the table below, note we only varied the costs for children 8 and under to simplify our modeling. Therefore, there is likely some conservatism in the costs for ages 9 to 18:

Scenario	Non-ABA Medical Costs 8 & Under	Non-ABA Medical Costs Ages 9 to 18
Low	$1,950	$3,900
Middle	$2,925	$3,900
High	$3,900	$3,900

(Amounts in 2009 dollars)

Administrative Costs

Typically, group medical claims costs could be expected to be 80 to 90% of premiums, meaning 10 to 20% of premiums are available for administration, profit, or other costs, often collectively referred to as "retention." We have estimated the incremental retention charge to be 15% of premium under our base assumptions.

Montana Market Data

The MEPS survey provides average premiums, enrollees, offer rates, take-up rates, and self-insured percentages by employer size for healthcare coverage sponsored by privately insured employers. From this data we estimated the size of the privately insured small group, insured large group, and self-insured markets. State specific premium data for Montana was available for 2006[12], so we trended this based on average recent employer

[11] Mandell, Cao, Ittenbach, & Pinto-Martin, 2006. Croen, Najjar, Ray, Lotspeich, & Bernal, 2006. Liptak, Stuart, & Auinger, 2006.

[12] MEPS state survey data. http://www.meps.ahrq.gov/mepsweb/data_stats/state_tables.jsp?regionid=-1&year=-1. Accessed January 2009.

premium increases provided from the Kaiser Family Foundation HRET[13] survey to estimate the 2009 average annual premium per member necessary to compute the cost of mandated benefits as a percentage of annual premiums.

As part of our development of premium and membership estimates, we completed reasonableness tests by reviewing insurer annual statement filings to ensure that the group premium estimates were not unreasonable.

[13] Kaiser Family Foundation and Health Research Educational Trust. Employer Health Benefits- 2008 Annual Survey.

6

Cost Estimates

Base Cost Estimates

The table below summarizes our "Middle" scenario annual cost estimates and premium increases on a per covered person basis, and as a percentage of the annual premiums for each market. Our "Middle" estimate is that in the long-term, the premium increase associated with the mandated benefits provided by SB 234 would be about 0.33% of insured premiums assuming that the small group and large group private insurance markets are covered by the Bill. However, we note that costs could be lower in the years immediately following the passage of the mandate due to the limited supply of ABA therapists.

The estimated cost increases for the small group and large group markets are shown in the table below. The annual claim cost per covered person estimate of $10.80, and premium increase of $12.70 are in 2009 dollars.

	Market		
	Small Group	Large Group	All
Covered Persons	90,000	83,000	173,000
Average Premium per Person	$3,700	$3,900	$3,796
Annual Mandate Claim Cost per Covered Person	10.80	10.80	10.80
Claim Cost as a Percentage of Premium	0.29%	0.28%	0.28%
Estimated Premium Increase with Admin @ 15%	12.70	12.70	12.70
Premium Increase as a Percentage of Premium	0.34%	0.33%	0.33%

Scenario Estimates

As discussed in Section 1, very little insurance data exists that can be used to directly estimate the costs of ABA benefits mandated by SB 234. This causes uncertainty in developing actuarial assumptions and cost estimates. Due to this uncertainty, it is useful to develop cost estimates for additional scenarios using more optimistic and pessimistic assumptions.

Cost estimates are very sensitive to various assumptions, especially those related to ABA utilization and costs for children 8 and under who have the higher benefit caps. Therefore, we varied our assumptions for these children 8 and under to develop estimated costs for ASD services under "Low," "Middle," and "High" cost scenarios, as shown in the table below:

Scenario	% Diagnosed Under Age 6 Starting ABA	Avg. Annual 8 & Under ABA Program Cost	Avg. Annual 8 & Under non-ABA Cost	Annual Premium Increase per Person	Premium Increase (% of Premium)
Low	40.0%	$30,000	$1,950	$9.50	0.25%
Middle	50.0%	$40,000	$2,925	$12.70	0.33%
High	66.7%	$46,969	$3,900	$16.90	0.45%

Short-Term Cost Estimates by Scenario

In addition to the uncertainty associated with long-term cost estimates, how quickly costs could reach their ultimate level due to the limited supply of ABA therapists is also uncertain. We have provided the table below to illustrate the potential short-term increases in premiums, and how they could grade into the long-term estimates over time.

Estimated Increase in Premiums due to SB 234 by Year						
Scenario	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Years 6 and Beyond**
Low	0.08%	0.12%	0.15%	0.18%	0.22%	0.25%
Middle	0.17%	0.20%	0.23%	0.27%	0.30%	0.33%
High	0.30%	0.33%	0.36%	0.39%	0.42%	0.45%

7

Comments on SB 234 Fiscal Note

SB0234 fiscal note dated 2/20/2009 (the fiscal note) is deficient to such a degree that it should not be considered when assessing the potential fiscal impact of Senate Bill 234. Our basis for coming to that conclusion is as follows:

1. Assumption 4 indicates a prevalence estimate of 1 in 150 for all ages. Because the average age of diagnosis is typically 3 to 4 years old, assuming that very young children will be diagnosed and treated for ASD leads to inflated cost estimates. The fact that the majority of the cost associated this bill is for children ages 0-8 due to the benefit caps magnifies the impact of this unreasonable assumption. Including an age at diagnosis assumption should reduce cost estimates of 0-8 year olds by 30% to 40%.

2. Assumption 4 employs a 1 in 150 treated prevalence assumption for ASD which likely overestimates the treated prevalence in Montana. As noted on page 6 of this report, Montana has one of the lowest rates of autism per IDEA Part B child count data in the nation. It is unlikely that the treated ASD prevalence underlying the fiscal note cost estimates would be so much higher than the rate of autism identified in the education system, especially in the short-term.

3. Assumption 17 mischaracterizes how the Oliver Wyman ABA unit cost estimates were developed. The fiscal note states:

   > "Based on this data, they [Oliver Wyman] developed an average cost per hour of ABA services based on Bureau of Labor Statistics health care wage data. This amount was determined to be $45.45 per hour for all ABA services...(Note: BLS health care wage data will understate any estimate of commercial reimbursement. BLS data is a composite of wage data derived from multiple payers such as Medicaid, Medicare, private pay, and commercial insurance as well as uncompensated care. Typically commercial insurance pays for health care services

> at rates well above those reimbursed by Medicaid or Medicare. Even so, using the $45.45 per hour rate, most children will reach the benefit caps."

This mischaracterizes the development and calls into question the reasonableness of Oliver Wyman's unit cost assumptions. In reality, the hourly rates were based on actual and expected reimbursement rates for commercially insured ABA programs and take into consideration differences in reimbursement rates by payer. Because the comments in the fiscal note are factually incorrect, they should be ignored.

4. Assumption 17 comments assume that the Oliver Wyman's Montana analysis is based on Virginia data and information. It is unclear why the fiscal note contains the following factually incorrect comment:

> "They [Oliver Wyman] noted that this amount may be highly variable since their model is based on Virginia legislation that calls for the majority of the mandated benefits to be for applied behavioral analysis."

Our Montana analysis is based on the estimated costs of the additional mandated benefits under SB 234 as written. These costs will be primarily for ABA services based on any reasonable assessment of the bill. In analyzing costs for SB 234 and similar bills mandating ABA and other ASD services, all professional analyses have concentrated on ABA costs since they are expected to drive the additional incremental ASD benefit costs. The often cited Ganz study: *The Lifetime Distribution of the Incremental Societal Costs of Autism* (report available at http://archpedi.ama-assn.org/cgi/reprint/161/4/343) shows that approximately 80-90% of direct medical expenses for children under 18 with ASD are for behavioral therapies- see Table 2 on page 346 of the study report.

5. Assumption 17 states:

> "For non-ABA services, HCBD has actual usual and customary fees (U&C) by provider type listed under assumption #19 below. These are not estimates and will be used in calculating unit costs for non-ABA therapy."

This comment is misleading. While the UCR amounts likely come from an actual source, the actual service costs developed based on these unit costs cannot be considered anything but estimates of the costs for the noted services based on the unit cost and utilization estimates contained in the fiscal note. Actual hourly reimbursement amounts will certainly be different than the UCR amounts in the fiscal note, and would likely be lower. It is curious why the fiscal note would reference UCR amounts when actual costs for these services would be available upon review of the State's own claim data.

6. Assumption 21a) states:

> "Using the actual distribution of state employee group benefit children by age, the OWAC model estimates that 34% of eligible children (20 of 59 children from assumption #3 above) will utilize an ABA program."

This is not true. Our model does not estimate that 34% of eligible children (20 of 59 children from fiscal note assumption #3) will utilize an ABA program. When considering the age at diagnosis assumptions (which the fiscal note likely has not done based other assumptions in the fiscal note) and ABA utilization by age, our modeling indicates a much lower overall utilization percentage for each cost scenario, and on average our modeling would indicate utilization of approximately half of the 34% indicated.

7. Assumption 22 states:

> "OWAC had substantial difficulty in estimating the utilization of non-ABA services. They created a specific estimate for the State of Virginia 'based upon studies of medical costs for ASD children and judgment regarding the increase in costs that could be expected due to the mandated benefits' based on specific historical claim experience for Virginia. When those assumptions were applied to Montana specific data, it was very inaccurate compared to known historical claims expenditures."

Assumption 22 needs to be refuted for several reasons:

a. The statement "OWAC had substantial difficulty in estimating the utilization of non-ABA services" is factually incorrect. Developing incremental cost estimates for services that were never covered does result in uncertainty in the estimation process, but that does not mean that OWAC had substantial difficulty in developing them.
b. The studies referenced are cited in Footnote 12 on page 11 of this report, they include analyses of medical costs from various geographical areas which we used to develop an assumption that, based on current typical coverages, ASD children will incur covered medical expenses that are approximately three times those of the average child. For our three cost scenarios, we assume that the incremental non-ABA costs mandated by the Bill would be an additional 50 to 100% of our estimate of the cost of currently covered medical services for ASD children in Montana.
c. The statement "When those assumptions were applied to Montana specific data, it was very inaccurate compared to known historical claims expenditures" is incorrect on its face. There is no Montana specific data related to the costs of benefits that are not covered and therefore, there cannot be "historical claims expenditures." The fiscal note essentially uses made up utilization statistics and estimated unit costs that likely do not reflect the actual unit costs for the State plan to develop cost estimates. To

be clear, there are no estimates in the fiscal note that are based on actual Montana claims experience.

8. Assumption 23 references the Abt report to the Pennsylvania Healthcare Cost Containment Council. This report is available at http://dhhs.nv.gov/autism/TaskForce/2008/ATF_Report_08/Appendix%20F.pdf.

   The Abt report also states in its conclusion on page 51: "In summary, the evidence submitted to the Pennsylvania Health Care Cost Containment Commission is sufficient to evaluate the impact of the HB 1150 mandate. The analyses and research papers support a finding of marginal premium increase costs of approximately $1 PM/PM attributable to the ASD benefit. These cost increases are modest relative to: ongoing insurance cost increases; estimated cost offsets for families and the Commonwealth; and better results for children and youth with ASD. The clinical and cost effectiveness research studies provided indicate that improvements in clinical and role functioning and quality of life can be anticipated for those children and youth with ASD who use evidence based behavioral therapies, including Applied Behavioral Analysis."

   It is unclear why the fiscal note would choose to highlight various pieces of information from this Abt report related to utilization of non-ABA services that may or may not have anything to do with estimating the incremental costs of the mandated services since many of the services referenced in Assumption 23 are probably currently covered to some degree in the State programs. The fiscal note highlights specific, detailed information, but completely ignores the conclusion of the 55 page report.

9. Assumption 25 shows a table with the comment "The OWAC model estimates that the children with PDD-NOS will not access ABA services." This comment is incorrect, we assume those children diagnosed with PDD-NOS will utilize services at the same rate as other children diagnosed with ASD.

10. Assumption 26 includes an incremental cost for hospitalization, while we do not have sufficient information to determine this with certainty, it is likely that a hospitalization like the one referenced would be covered under the current health plan.

11. Assumption 27 includes a trend estimate for medical and prescription drugs. The trend should actually be based on the expected increase in the $50,000 and $20,000 benefit caps. The Bill as written does not appear to include a mechanism to adjust these caps, so the trend factor should be 0% given the assumptions used in the fiscal note.

12. Assumptions 31-44 for Montana University System have the same problems as those noted in 1-11 above.

We believe more reasonable estimates of the fiscal impact could be made by applying the percentages in the “Estimated Increase in Premiums due to SB 234 by Year” on page 14 of this report to the expected annual plan expenditures for the currently employed state workers. We would expect that costs associated with SB 234 for retirees would be minimal due to the fact that they would have very few children 18 or under.

Appendix 1

Cost Assumptions – Illustrative Exhibits

EXHIBIT I - SUMMARY OF SENATE BILL 234 "MIDDLE" ASSUMPTIONS AND COSTS

State Montana

Mandate Market

Individual	No
Small Group	Yes
Large Group	Yes
Self-Insured (ERISA)	No
State and Local Govt	No

Age Limits for Autism Benefits

Minimum	0
Maximum	18

Additional Annual Medical Costs for Non ABA Services

Ages 0-8	$ 2,925	
Ages 9-18	$ 3,900	(Note this was not varied by Scenario)

Annual Limits by Covered Service

	Hours Limit	Max Hours	Dollar Limit	Max $s
ABA (Ages 0 to 8)	No	-	Yes	$50,000
ABA (Ages 9 to 18)	No	-	Yes	$20,000

Key Assumptions:

United States Prevalence

Diagnostic Subtype	Ultimate Prevalence	Average Age of Diagnosis
Autistic Disorder	1 in 450	3
PDD-NOS	1 in 300	3
Asperger's	1 in 900	6
All ASD	**1 in 150**	

Montana Prevalence Adjustment: 0.75

Montana Prevalence

Diagnostic Subtype	Ultimate Prevalence	Average Age of Diagnosis
Autistic Disorder	1 in 600	3
PDD-NOS	1 in 400	3
Asperger's	1 in 1200	6
All ASD	**1 in 200**	

% of Diagnosed Children w/ ABA

Under 6	50.0%
6	37.5%
7	25.0%
8	16.7%
9	11.1%
10	7.4%
11	4.9%
12	3.3%
13 to 18	2.5%

Average ABA Program Hours

Ages Under 8	1,500
Ages 8 to 12	671
Ages 13 to 18	401

Average Annual ABA Program Cost 8 & Under: $40,000

Market	Coverage Estimates: Number of Persons Covered	Premium (Per Person)	Total Premium	Costs Excluding Administrative Expense: Costs	Costs (% of Premium)	Cost (Per Covered Person)	Premium Increase including Admin @ 15%: Incremental Premium	Premium Increase %	Annual Increase per Covered Person
Individual									
Small Group	90,000	3,700	333,000,000	972,000	0.29%	10.80	1,144,000	0.34%	12.70
Large Group	83,000	3,900	323,700,000	896,400	0.28%	10.80	1,055,000	0.33%	12.70
Self-Insured (ERISA)									
State, Local and Federal									
Total	173,000	$ 3,796	$ 656,700,000	$ 1,868,400	0.28%	$ 10.80	$ 2,198,000	0.33%	$ 12.70

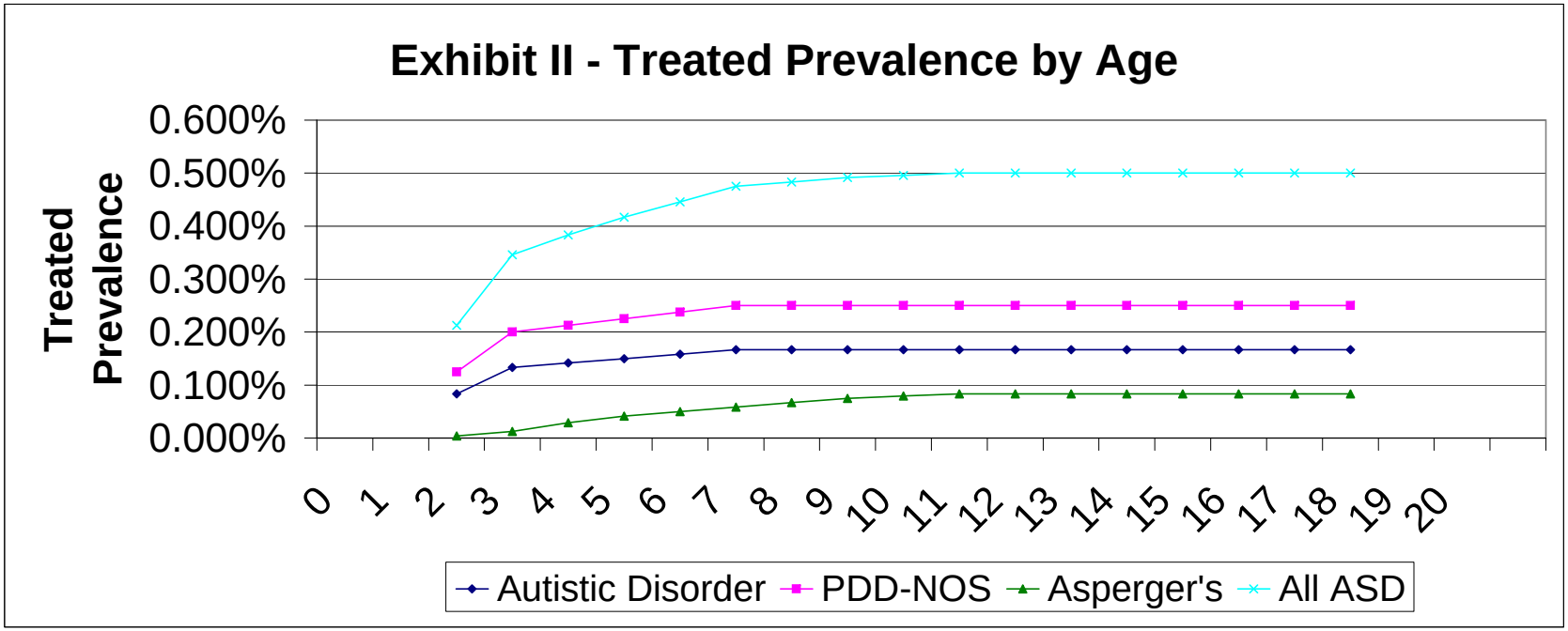
Exhibit II - Treated Prevalence by Age
Treated Prevalence
0.600%
0.500%
0.400%
0.300%
0.200%
0.100%
0.000%
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Autistic Disorder
PDD-NOS
Asperger's
All ASD

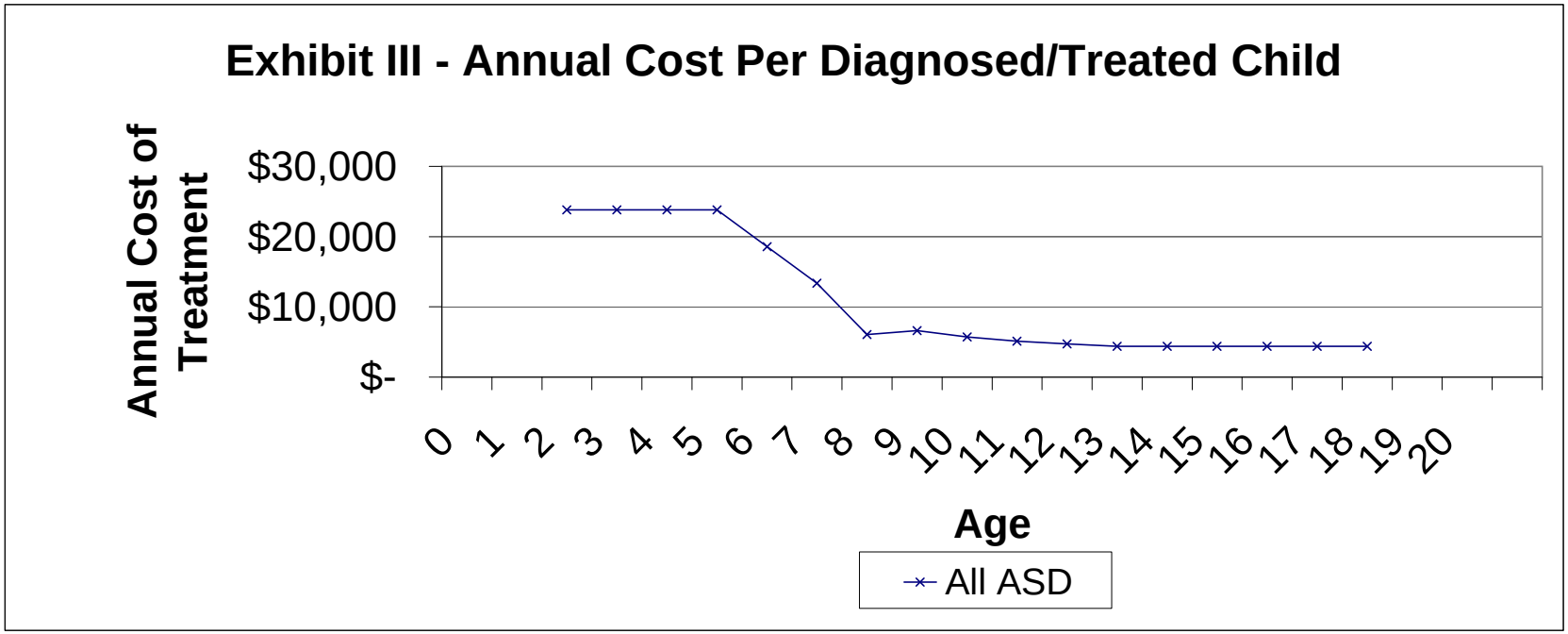
Exhibit III - Annual Cost Per Diagnosed/Treated Child
Annual Cost of Treatment
$30,000
$20,000
$10,000
$-
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Age
All ASD

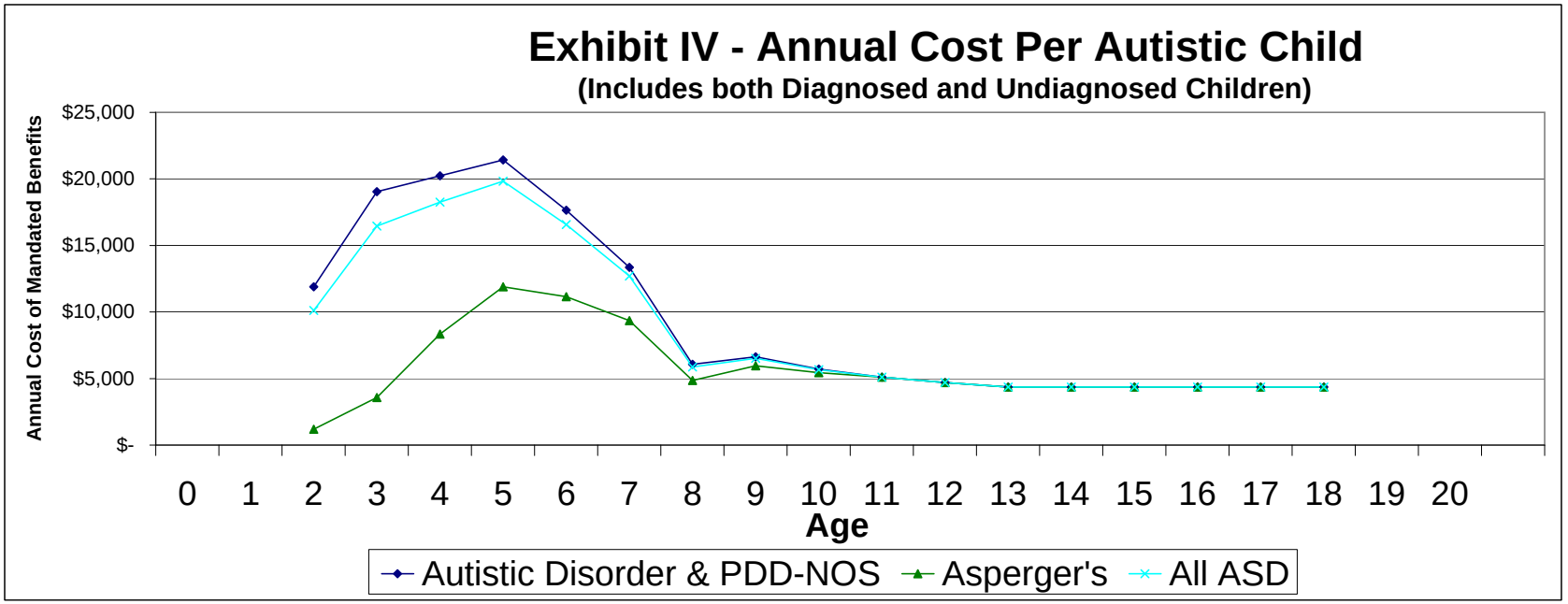
Exhibit IV - Annual Cost Per Autistic Child
(Includes both Diagnosed and Undiagnosed Children)
Annual Cost of Mandated Benefits
$25,000
$20,000
$15,000
$10,000
$5,000
$-
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Age
Autistic Disorder & PDD-NOS
Asperger's
All ASD

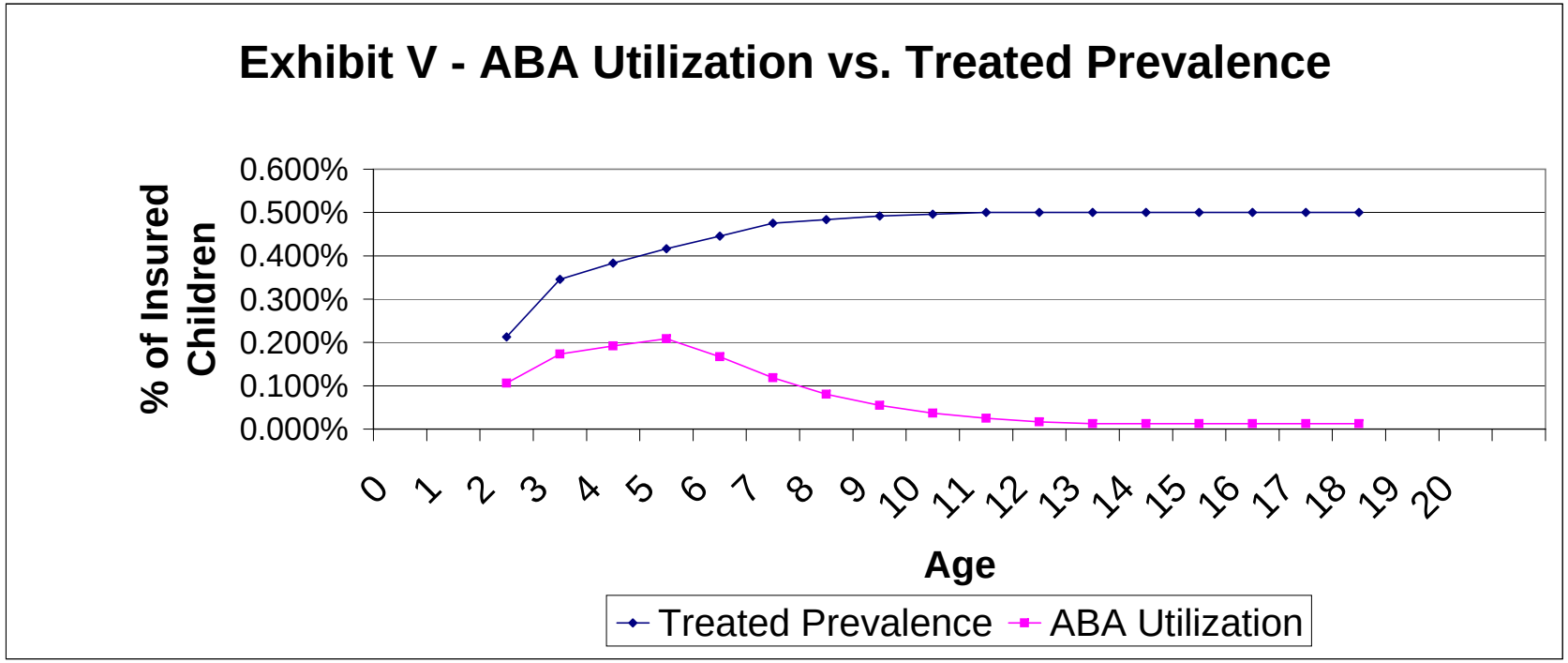
Exhibit V - ABA Utilization vs. Treated Prevalence
% of Insured Children
0.600%
0.500%
0.400%
0.300%
0.200%
0.100%
0.000%
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Age
Treated Prevalence
ABA Utilization

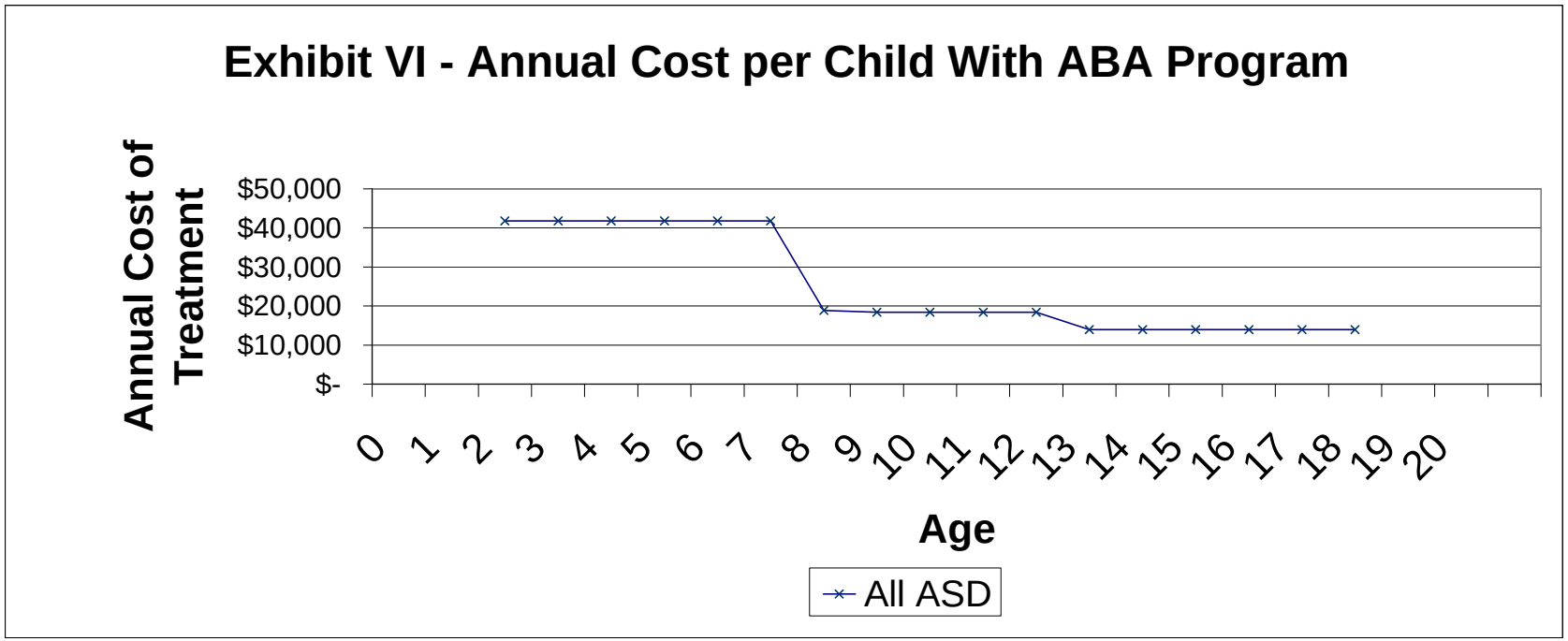
Exhibit VI - Annual Cost per Child With ABA Program
Annual Cost of Treatment
$50,000
$40,000
$30,000
$20,000
$10,000
$-
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Age
All ASD

OLIVER WYMAN

Two Logan Square, 22nd Floor
Philadelphia, PA 19103-2797
1 215 246 1000

Oliver Wyman Actuarial Consulting, Inc.