Report to the Health and Human Services Interim Subcommittee

Medicaid Autism Waiver Pilot

Prepared by the:

Division of Medicaid and Health Financing

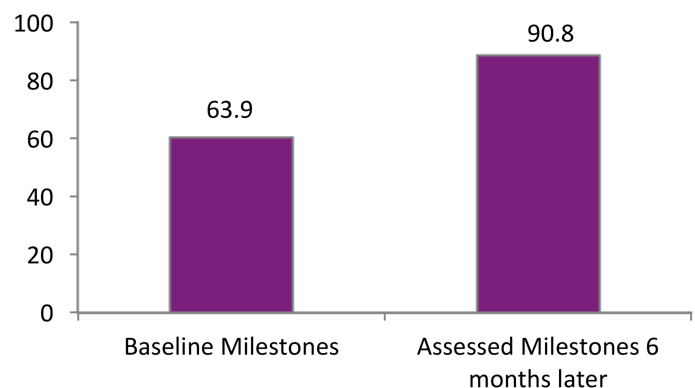
November 2013

Revised January 2014

Medicaid Autism Waiver Executive Summary

The Department of Health (Department), in collaboration with the Department of Human Services and multiple stakeholders, designed the Medicaid Autism Waiver Pilot Program (the Waiver). The State submitted the Waiver application to the Centers for Medicare and Medicaid Services (CMS) on June 30, 2012. CMS approved the Waiver with an October 1, 2012 effective date. The Waiver serves children ages 2 through 6 years of age.

Throughout implementation, the Department worked through a variety of challenging policy issues including developing reasonable eligibility and enrollment policies, assuring the participation of qualified providers, developing appropriate provider rates, and building sufficient provider infrastructure and capacity (including addressing the needs of rural children). Since its implementation, the Waiver has provided services to more than 300 children statewide.



Outcomes and Effectiveness

The primary service provided in the Waiver is Applied Behavioral Analysis (ABA). ABA involves breaking a skill into smaller parts and teaching one sub-skill at a time until mastery is achieved. To evaluate effectiveness of ABA services, the Department used two evaluation tools to establish baseline proficiencies before services began and the child's progress after receiving services for six months. The first tool, the *Verbal Behavior Milestones Assessment and Placement Program* (VB-MAPP), was used by Board Certified Behavior Analysts to evaluate each child's verbal and other associated skills across 16 major areas. The second tool, the *Vineland-II Parent/Caregiver Rating Form* (Vineland-II), was used by parents to report their child's progress as they observe it. The tool includes a series of questions across 5 main areas: Communication, Daily Living Skills, Motor Skills, Socialization and Maladaptive Behaviors.

Outcome results from both evaluation tools were positive and showed the acquisition of new skills during the pilot program.

Parental Observations - Vineland Assessment Results

Major Skill Areas	Baseline	6 Month Assessment	Percentage Change
Communication	65.9	81.8	24%
Daily Living	47.2	58.8	25%
Socialization	56.2	70.8	26%
Motor	93.9	106.0	13%

Waiver Service Costs

Typical Service Utilization for an Individual Child

During initial program development, the Department and group of stakeholders estimated each child would utilize a maximum of 20 hours of direct ABA service per week. With additional information from providers and families, the Department determined that the estimated utilization was higher than children in this age range would likely experience. Utilization estimates for the Waiver were ultimately set at an average of 15 hours per week. The average per-child service expenditure was estimated to be approximately $29,000 per year.

To develop reliable estimates and projections of service utilization, the Department analyzed a sub-set of participating children. These children began participation in February or March of 2013 and received services on a regular basis. Receiving services on a regular basis was evidenced by the presence of paid claims in each month following the month of the child's initial assessment. A total of 157 children met this criteria. The utilization pattern experienced in the pilot is around ten hours of direct ABA services per week at a total program cost of about $20,784 per year. In addition to direct service costs, the administrative costs involved in operating the program

(including the provision of case management services) must be considered. Average service utilization along with average administrative costs are shown in the table below.

Typical Service and Administrative Cost per Child [1]				
Service	**Hours/Units Per Month**	**Cost Per Unit**	**Monthly Cost**	**Annual Cost**
Intensive Individual Support – Consultation Service (ABA)	5.2	$ 80.00 (Hourly)	$ 416	$ 4,992
Intensive Individual Support – Direct Service (ABA)	39.0	$ 28.32 (Hourly)	$ 1,105	$ 13,260
Respite	4.4	$ 11.48 (Hourly)	$ 51	$ 612
Financial Management Services	0.42	$ 40.37 (Monthly)	$ 17	$ 204
Administrative Cost (Includes Case Management)	N/A	N/A	$143	$1,716
Total			**$ 1,732**	**$20,784**

Typical Service and Administrative Cost per Child (with 3 Months Additional Claims History)[2]				
Service	**Hours/Units Per Month**	**Cost Per Unit**	**Monthly Cost**	**Annual Cost**
Intensive Individual Support – Consultation Service (ABA)	5.6	$ 80.00 (Hourly)	$ 448	$ 5,376
Intensive Individual Support – Direct Service (ABA)	39.2	$ 28.32 (Hourly)	$ 1,110	$ 13,320
Respite	6.5	$ 11.48 (Hourly)	$ 75	$ 900
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Administrative Cost (Includes Case Management)	N/A	N/A	$143	$1,716
Total			**$ 1,797**	**$21,564**

[1] **Please Note – The totals presented in the November 2013 Report have been revised due to an error in the claims data query methodology. The error involved setting query parameters that defined evidence of consecutive months of paid claims as being tied to the service the child was receiving and not to the child themselves. This error led to the exclusion of paid claims data that should have been included. The revised numbers are a correction of this error. In addition, the Department has included administrative costs within this table to allow the reader to see total costs (service and administration) in a single view.**

[2] Includes claims data for September, October and November 2013

Services to Children in Rural Areas
Approximately 24 percent of the children participating in the Waiver lived in counties outside of the Wasatch Front. Although Waiver services were successfully provided to children throughout the State, there were some specific areas (for example, Price and Vernal) where finding an adequate number of direct service providers proved to be quite difficult.

The Waiver program was specifically designed to allow for Telehealth/video-conferencing technologies to be a mechanism for providing some services to children not residing along the Wasatch Front.

Providers report that although Telehealth was an effective tool and was beneficial in reducing some travel time, the amount of travel required was still greater than anticipated. Providers report that the rates currently paid do not fully cover the cost of providing services to children in rural areas. The Department suggests that a re-evaluation of the rate to address the increased cost of providing services in rural areas should be considered if the program is authorized going forward.

Summary/Conclusion
- Outcome results were positive and showed the acquisition of new skills during the pilot program.
- Utilization of services was lower than originally estimated but the pilot experience is likely not fully reflective of what the experience would be in an ongoing program.
- Finding an adequate number of qualified, direct service workers and addressing the increased cost of providing services in rural areas are challenges that require ongoing attention.

Autism Services Pilot Introduction

With the passage of HB272 during the 2012 Legislative General Session, a pilot program was created to provide services to children with autism spectrum disorders (ASD). The pilot program was divided into three sub-pilots: (1) the Medicaid Waiver pilot program, (2) the Autism Treatment Account, a public/private partnership, and (3) the Public Employees' Health Plan (PEHP) pilot.

Within the Department of Health, the Medicaid Autism Waiver is operated by the Division of Medicaid and Health Financing and the Autism Treatment Account is operated by the Division of Family Health and Preparedness. The portion of the pilot for children of state employees is managed by PEHP.

Each sub-pilot was implemented by its managing agency in accordance with the parameters described in the legislation and any applicable rules and regulations. For example, the Medicaid waiver required the review and approval of the Centers for Medicare and Medicaid Services (CMS) prior to implementation and the Autism Treatment Account used the Department's Request for Application process to select service providers.

While each sub-pilot has unique characteristics, there are commonalities among them. One commonality is the provision of services based primarily on Applied Behavioral Analysis (ABA). ABA is a well-developed intervention, based on a mature body of scientific knowledge, and established standards for evidence-based practice. ABA employs teaching where the objectives of intervention are to teach a child those skills that will facilitate his or her development and help him or her achieve the greatest degree of independence and the highest quality of life possible. Although many different techniques comprise ABA, the primary instructional

method is called Discrete Trial Teaching (DTT). DTT involves breaking a skill into smaller parts, teaching one sub-skill at a time until mastery, allowing repeated practice in a concentrated period of time.

This report provides detailed information about the Medicaid Autism Waiver portion of the pilot. Following is a brief overview of the Autism Treatment Account and the PEHP Program:

Autism Treatment Account

The Autism Treatment Account (ATA) was established by the Utah Legislature in 2010 and revised during the 2012 Legislative General Session to create and fund a pilot program to provide services for children ages 2 through 6 years. The ATA is a restricted special revenue account and, during the two-year pilot program, has been funded through a State appropriation of $1M and $750,000 combined donations from Intermountain Healthcare and Zions Bank.

ATA is guided by a six-member legislatively mandated advisory committee appointed by the Governor. The ATA Advisory Committee and the Department determined that the most efficient and effective way to provide therapy for children under HB272 was to issue a request for grant application (RFA). The RFA resulted in contracts with four ABA therapy providers. Since implementation of the program, the ATA has funded ABA therapy to 35 children.

Public Employees Health Plan Pilot

The PEHP Autism Treatment Pilot is a two-year, single enrollment pilot for children from 2 to 7 years old with a diagnosis of ASD.

It is an insurance product and the requirements are:

- $250 deductible with 80/20 co-insurance
- $150 a day max with a maximum benefit of $30,000/year

PEHP Autism Treatment Pilot Quick Facts	
Number Applied	25
Number Accepted	23
Number who Sought Services	14
Number Not Seeking Services	6
Number who Left the Program	3
Age 3	1
Age 4	4
Age 5	5
Age 6	7
Age 7	5

Purpose of the Medicaid Autism Waiver Pilot Report

The Medicaid Autism Waiver Pilot Report (Report) is submitted in response to the following language from HB272 passed by the 2012 Legislature:

"The department shall report to the Legislature's Health and Human Services Interim Committee by November 30, 2013, and prior to each November 30 thereafter while the waiver is in effect regarding:
(a) the number of children diagnosed with autism spectrum disorder and the number of children served under the waiver;
(b) success involving families in supporting treatment plans for autistic children;
(c) the cost of the autism waiver program; and
(d) the outcomes and effectiveness of the services offered by the autism waiver program."

Autism Spectrum Disorders in Children – Utah Numbers

HB272 requires the Department to provide information about the number of children diagnosed with ASD as well as the number of children served in the waiver. Currently there is no reporting mechanism that captures the precise number of children diagnosed with ASD, but there is information on prevalence rates in Utah. By analyzing prevalence rates by age and population, the tables below provide estimates of the number of children with ASD in Utah.

Table 1. Estimated Administrative Prevalence[3] of Autism Spectrum Disorders
(Per 1,000 children by age (four, six and eight) and study year (2002-2010) [4]

Year	Age	Population Size	Cases	Prevalence/1,000
2002*	8	26,213	171	6.5 (1 in 153)
2006*	4	33,955	256	7.5 (1 in 133)
	6	32,801	322	9.8 (1 in 102)
	8	29,494	301	10.2 (1 in 98)
2008*	4	35,803	293	8.2 (1 in 122)
	6	34,368	418	12.2 (1 in 82)
	8	33,210	432	13.0 (1 in 77)
2010**	4	37,066	342	9.2 (1 in 108)
	6	37,134	508	13.7 (1 in 73)
	8	36,201	573	15.8 (1 in 63)

* 2002-2008 includes Davis, Salt Lake, and Utah counties.
** 2010 includes Davis, Salt Lake, Tooele, and Utah counties.

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[3] Administration prevalence rates include children with an existing ASD classification from a school or health provider.

[4] Data in this table excerpted from *January 2013, Utah Health Status Update: Change in Rates of Children with Autism Spectrum Disorders 2002-2010, Utah Registry of Autism and Developmental Disabilities (URADD).*

Table 2. Estimated Number of Utah Children with ASD Based on Population and Prevalence			
Age	**Total Population**	**Estimated Prevalence**	**Estimated Population with ASD**
Under 5 Years	263,924	1 in 108	2,444
5 to 9 Years	249,572	1 in 68	3,670
10 to 19 Years	449,047	1 in 88	5,103
		Total:	11,217

Table Information:

- Age cohorts and population information from the *United States Census, 2010 Demographic Profile Data*
- Under 5 Years - Prevalence is estimated using 2010 URADD prevalence numbers for 4 year olds (1 in 108)
- 5 to 9 Years – Prevalence is estimated by averaging 2010 URADD prevalence numbers for 6 year olds (1 in 73) and 8 year olds (1 in 63)
- 10 to 19 Years – Prevalence is estimated using CDC national prevalence data from 2008 (1 in 88)

Medicaid Autism Waiver – Demographics

The Department held two open application periods: one in October 2012, and the other in June and July 2013. A total of 572 children applied for the Waiver. There were approximately 90 applicants who were ineligible because they did not meet the age requirements, lacked a valid ASD diagnosis or who ultimately decided not to participate. Since its inception, the Waiver has served over 300 children, 79 percent of whom were boys. Detailed demographic information is found in Table 3 below.

Table 3. Medicaid Autism Waiver Demographics of Children Receiving Waiver Services	
Waiver Enrollee Information	**Children Served**
Females	21%
Males	79%
Age at Time of Admission	
Age 2	60 (19%)
Age 3	94 (31%)
Age 4	94 (31%)
Age 5	54 (18%)
Age 6	5 (1%)
Children Served by Local Health District	
Bear River (Box Elder, Cache and Rich Counties)	22 (7%)
Central Utah (Juab, Millard, Piute, Sanpete, Sevier and Wayne Counties)	9 (3%)
Davis County	38 (12%)
Salt Lake County	107 (35%)
Southeastern Utah (Carbon, Emery, Grand and San Juan Counties)	4 (1%)
Southwest Utah (Beaver, Garfield, Iron, Kane and Washington Counties)	20 (7%)
Summit County	2 (<1%)
Tooele County	8 (3%)
Tri-County (Daggett, Duchesne and Uintah Counties)	5 (2%)
Utah County	64 (21%)
Wasatch County	3 (1%)
Weber-Morgan (Weber and Morgan Counties)	25 (8%)

Disenrolled from the Waiver by Reason	Number of Children
Moved out of State	2
Aged out – Turned 7	0
Voluntary Disenrollment	5
Failed to Participate on an Ongoing Basis	2
Moved to Another Medicaid Waiver	1
Miscellaneous Information	
Households with Multiple Children	24 households with 49 children

Waiver Development and Implementation

HB272 provided specific direction on various aspects of program development. The following section describes how the Department followed the legislative guidance that was given.

Convene a Public Process

HB272 directed the Department to submit a Medicaid waiver for CMS approval by July 1, 2012. In April 2012, the Department instituted the Autism Waiver Development Workgroup (Workgroup). The Workgroup was comprised of multiple stakeholders with ASD expertise. Participants included: a parent of a child with ASD, providers of ABA services, professionals from the Department, both from Medicaid and the Bureau of Children with Special Healthcare Needs, the Utah State Office of Education, and the Utah Department of Human Services, Division of Services for People with Disabilities and Division of Substance Abuse and Mental Health. The Workgroup completed a series of meetings in which a variety of program elements were developed including: defining program eligibility requirements, developing policies for program admission, defining allowable services including limitations and estimated utilization, and developing provider qualifications and program administration requirements. The Workgroup produced a draft waiver document. To share the contents of the draft document and to seek general public input, the Department offered a series of 6 public meetings in Logan, Ogden, Price, Provo, Salt Lake City and St. George. In addition to the public meetings, the Department created the Autism Waiver website. Within the site, the public was able to view and provide feedback on the draft waiver document. The Department also developed a listserv that allowed interested persons to sign up to receive updates about the Waiver. In addition, the Department shared the draft document with several other community stakeholders including the Utah Indian Health Advisory Board and Medicaid's Medical Care Advisory Committee.

Employ Outreach to Children in Rural and Underserved Areas of the State

Throughout waiver development, the Workgroup gave specific consideration to rural and underserved children by doing the following:

- Developed an enrollment process that assured the inclusion of children from rural areas
- Held statewide public meetings to share information and solicit public input about the Waiver
- Crafted service specifications to allow for ABA services to be provided through TeleHealth/video-conferencing technologies.

Assure Use of Treatments with Demonstrated Efficacy

Service Specifications **-** To assure only services with demonstrated effectiveness are offered through the Waiver, the Workgroup reviewed a report completed by the National Autism Center, *The National Standards Report, 2009*. This report is the result of the *National Standards Project* which addresses the need for evidence-based practice guidelines for ASDs.[5] The Report compiled findings from a variety of empirical studies and categorized different treatment modalities to fit into one of three categories: "*Established Treatments*", "*Emerging Treatments*", and "*Unestablished Treatments*". Overwhelmingly, treatments categorized as *Established Treatments* included concepts of ABA. Accordingly, the principal service provided in the Waiver is ABA. The Waiver service definition requires that treatment plans will be primarily based on therapies with a rating of "Established" as effective by the *National Autism Center's National Standards Report, 2009.*

Provider Specifications **-** Within the Waiver service definitions, there are two levels of ABA treatment. First is the "*Consultant*" level. The Consultant is the treating professional who evaluates the child's needs, writes the treatment plan to address specific goals, and supervises and evaluates the effectiveness of treatment. The Consultant is required to be either a Board Certified Behavior Analyst (BCBA) or a licensed psychologist. A BCBA must possess a minimum of a master's degree in behavior analysis or related field and must have completed 1500 hours of Supervised Independent Fieldwork in behavior analysis.

The second level of ABA service is provided by a "*Direct Service*" worker. The Direct Service worker provides face-to-face instruction to the child per the treatment plan established by the Consultant. Direct services are typically provided in the child's home. The Direct Service worker is responsible for documenting the child's response to interventions and is supervised by the Consultant. The Direct Service worker must be at least 18 years old, have a high school diploma, have successfully completed six months of work experience utilizing behavior analysis procedures with children with ASD or evidence of equivalent experience and training, have twenty hours of pre-service training on ASDs, autism skill training supports, behavior support plans, data collection, and working with families and must have completed at least one semester of college level courses in a related field or demonstrated experience of more than six months in working directly with children with disabilities.

Employ Methods to Engage Family Members in the Treatment Process

In an effort to ensure that family members were involved in the treatment process, the Workgroup drafted language that required:

- The family to provide at least five hours of non-paid direct intervention (ABA or similar service) with the child per week. The parents and/or family would have been required to self-attest to their willingness to provide the weekly services as a condition of participation.
- At least one family member to be present and working with the Direct Service staff at least 40 percent of the time that direct services were being provided.

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[5] http://www.nationalautismcenter.org/pdf/NAC%20Standards%20Report.pdf

The waiver application submitted to CMS included both of these requirements. CMS required the State to remove the requirement that families would be willing to provide five hours of non-paid services per week. However, CMS did allow the State to retain the requirement that at least one family member be present 40 percent of the time that direct services were being provided.

Waiver Implementation Elements

Enrollment Process

The Department made the decision to use open enrollment periods as the process for admitting children into the Waiver. This process is defined in the Department's administrative rule *R414-509 Medicaid Autism Waiver Open Enrollment Process*. Use of an open enrollment process allows the Department to fill available Waiver openings without needing to maintain a waiting list for applicants who exceed the number of available openings.

To assure parity, available openings are allocated on a statewide basis using Utah population distribution information from the 2010 U.S. Census. For example, approximately 37 percent of the state's population resides in the Salt Lake County area; therefore, about 37 percent of available waiver openings are available to children residing in Salt Lake County.

There have been two open enrollment periods since implementation: the first in October 2012 and the second in June and July 2013. Between the two periods, 572 applications were received and 317 children were brought into services. The Department used a variety of approaches to publicize the commencement of the open enrollment periods including press releases, posting flyers in Spanish and English in pediatrician offices, listserv email notifications, Autism Waiver website posting, and working with known ASD advocates and stakeholders for dissemination of information to their respective groups.

Covered Services and Payment Rates

The waiver has four covered waiver services that are paid on a fee-for-service basis:

1) *Intensive Individual Supports – Consultant Level (Applied Behavioral Analysis Service)*
2) *Intensive Individual Supports – Direct Service Level (Applied Behavioral Analysis Service)*
3) *Respite Services – Either Traditional Provider or Self-Administered by Family*
4) *Financial Management Service – Supportive Service to Complete Employer-Related Functions for Self-Administered Services*

The waiver has one service that is provided as an administrative function:

5) *Support Coordination Services – Service to Enroll Children, Educate Families about available Services, Develop Service Plans and Coordinate and Oversee the Child's Waiver Services*

<u>*Intensive Individual Supports – Consultant Level (ABA Service)*</u>

Consultant level services are provided by a BCBA or a Licensed Psychologist. The provider serves as the treating professional who evaluates the child's needs, writes the treatment plan to meet specific goals, supervises direct services and evaluates the effectiveness of treatment.

The Consultant level service rate was developed by surveying Utah companies providing ABA services through contracts with private insurance companies and through a pilot program offered to children of Veterans Administration employees. The consistent response was that private insurance rates ranged from between $100-$125 per hour. Providers confirmed that this service rate was typically a "bundled" rate that included a combination of both the consultant's time and the direct service worker's time.

In addition to surveying private insurance rates, the Department reviewed rates being paid for similar services within Utah's other Medicaid home and community based waiver programs. *Behavior Consultation* is a service offered in the Community Supports Waiver for Individuals with Intellectual Disabilities which requires a similar level of education and credentialing. This service is paid at a rate of $55 per hour. *Behavior Consultation* is typically provided at a residential services provider setting in which the provider can provide services to multiple waiver participants during a single visit to the residence. In the Medicaid Autism Waiver, providers are required to travel from one waiver participant's home to another and are not able to treat multiple clients in a single visit or in an office setting. In addition to the in-home services/travel considerations, the providers are also required to purchase copyrighted evaluation instruments in order to complete baseline and periodic assessments of waiver participants.

Based on the wide disparity between the private insurance rate ($100-$125 per hour) and the Community Supports Waiver service rate ($55 per hour), the decision was made to pay 80 percent of the lowest rate paid under the private-insurance rate, $80 per hour.

Intensive Individual Supports – Direct Service Level (ABA Service)

In the initial waiver submitted to CMS, the Department proposed a payment rate that was patterned after the *Supported Living Services* rate that is offered in the Community Supports Waiver. Upon attempting to recruit new providers, the Department recognized that the approved rate was not sufficient to attract enough providers to assure access to the service. The Department also became aware that patterning the Autism Waiver direct service rate after the Supported Living Services rate neglected to account for some unique characteristics of this new service. For example, the direct services workers who are providing ABA services to children with ASD utilize a significant amount of teaching supplies (educational items, games, puzzles, flashcards etc.) and there is significant training that the providers must give to the direct service workers to assure they are competent to complete the discrete trials and other facets of the service. The Department did not take these types of administrative costs into account in its original modeling.

In response, the Department disseminated a cost survey to the provider community and requested that interested providers submit detailed information about the costs that they proposed be included in the rate. Medicaid's rate setting staff reviewed the survey responses and recommended an increase to the previously established rate. The rate was ultimately set at $28.32 per hour.

Respite Services – Provided through either a Traditional Provider or Self-Administered Services

Respite Services are available to give relief to the child's primary care givers. Respite services are limited to an average of 3 hours per week. The rate paid for this service is the same as the *Respite* rate offered in the Community Supports Waiver, $11.48 per hour.

Financial Management Service

Financial Management Services is offered in support of the Self-Administered Services delivery option. Services rendered under this definition include those to facilitate the employment of respite service providers by the child's parent including:

a) Provider qualification verification;

b) Employer-related activities including federal, state, and local tax withholding/payments;

c) Medicaid claims processing and reimbursement distribution, and

d) Providing monthly accounting and expense reports to the consumer.

The rate paid for this service is the same as the *Financial Management Services* rate offered in the Community Supports Waiver, $40.37 per month.

Support Coordination Services

States have the discretion to determine whether Support Coordination (Commonly referred to as Case Management) will be provided as a direct waiver service or as an administrative function. Because the program was developed as a pilot program and because the Department wanted to assure consistency in enrolling children, establishing service plans and assuring that providers completed required assessments prior to services beginning. The State decided to offer Support Coordination as an administrative service. Support Coordination is provided by DSPD staff. Information about the administrative cost associated with this service is described in Table 6.

Table 4. Waiver Service Payment Rates

Service Title	**Payment Rate**
Intensive Individual Supports – Consultant (ABA)	$80.00/hour
Intensive Individual Supports – Direct Service (ABA)	$28.32/hour
Respite Services	$11.48/hour
Financial Management Services	$40.37/month
Support Coordination Services (Provided as an Administrative Service)	See Table 6

Waiver Service Utilization and Cost

Typical Service Utilization for an Individual Child

During initial program development, the Workgroup estimated each child would utilize a maximum of 20 hours of direct ABA service per week. With additional information from providers and families, the Department determined that the estimated utilization was higher than the children in this age range would likely experience. Utilization estimates for the Waiver were ultimately set at an average of 15 hours per week.

In order to develop reliable estimates and projections of service utilization, the Department analyzed a sub-set of participating children. These children began participation in either February or March of 2013 and received services on a regular basis. Receiving services on a regular basis was evidenced by the presence of paid claims in each month following the month of the

child's initial assessment. A total of 157children met this criteria. . The utilization pattern experienced in the pilot is around ten hours of direct ABA services per week at a total program cost of about $20,784 per year. In addition to direct service costs, the administrative costs involved in operating the program (including the provision of case management services) must be considered. Average service utilization along with average administrative costs are shown in the table below.

Table 5. Typical Service and Administrative Cost per Child [6]

Service	Hours/Units Per Month	Cost Per Unit	Monthly Cost	Annual Cost
Intensive Individual Support – Consultation Service (ABA)	5.2	$ 80.00 (Hourly)	$ 416	$ 4,992
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Table 6. Typical Service and Administrative Cost per Child (with 3 Months Additional Claims History)[7]

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[7] Includes claims data for September, October, and November 2013

Overall Program Expenditures

Table 6 shows total service and administrative program expenditures through September 2013

Table 7. Waiver Program Expenditures – Through September 30, 2013			
Fee-for-Service Costs	**State Funds**	**Federal Funds**	**Total Funds**
Waiver Service Costs	$627,112	$1,463,260	$2,090,372
Administrative Costs	**State Funds**	**Federal Funds**	**Total Funds**
Department of Health – Personnel and Assessment Costs	$45,452	$45,452	$90,904
Department of Human Services Personnel (Excluding Support Coordination)	$81,941	$81,941	$163,882
Support Coordination Services	$79,300	$79,300	$158,600
Total Service and Administrative Costs	**$833,805**	**$1,669,953**	**$2,503,758**

Individual Outcomes

To gauge the progress of children receiving services through the Medicaid Autism Waiver, the Department used two instruments to establish baseline proficiencies and progress made at six-month intervals. The *Verbal Behavior Milestones Assessment and Placement Program* (VB-MAPP) was the tool the Board Certified Behavior Analysts or licensed psychologist used to evaluate each child from a clinical perspective and the *Vineland-II Parent/Caregiver Rating Form* (Vineland-II) was the tool that parents completed to assess the child's progress from the family's perspective.

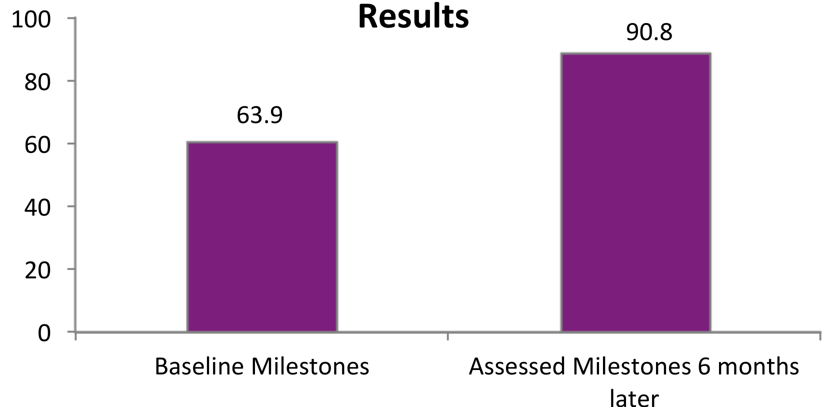
Information and Results of VB-MAPP Assessment

The VB-MAPP involves a Milestones Assessment which evaluates the child's existing verbal and other associated skills across 16 major areas and displays their progress over time. Repetition of various tasks, either when prompted or observed during testing, are used to gauge the child's mastery of skills.

The VB-MAPP assesses 3 developmental levels/ages, 0-18 months, 18-30 months, and 30-48 months. Some skills span multiple developmental levels such as 'Listener' or 'Social', increasing in complexity with each level. Others such as 'Math', 'Reading' and 'Writing' only appear in higher levels. A child with mastery of all 170 measurable Milestones would have the ability to demonstrate the skills of a typical 4-year old child.

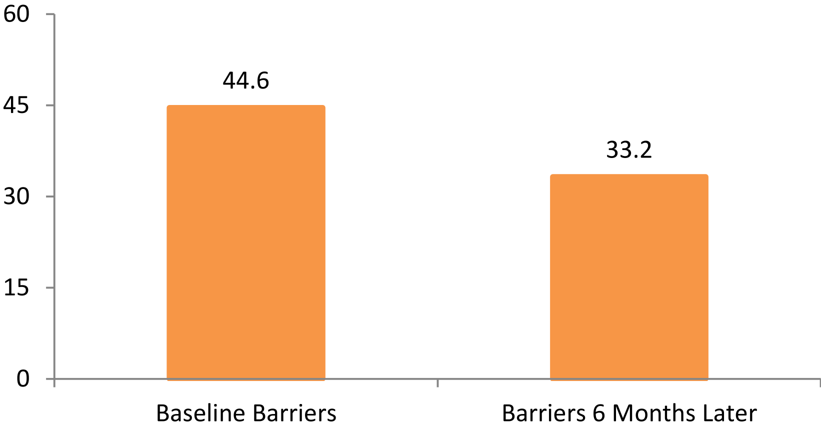
From the cohort enrolled in the program from the October 2012 application period, 137 children had both a baseline and 6-month assessment completed for inclusion in this report.

The data for the cohort showed an average Milestone increase of 26.9 across all developmental levels—a 42 percent increase from the baseline competency.



In addition, the VB-MAPP evaluates 24 barriers regularly faced by children with developmental delays. Barriers are behaviors that prevent or delay the child's developmental progress. By evaluating barriers, the BCBA can develop a treatment plan with goals to reduce the number and impact of the child's identified barriers.

The data for the cohort showed an average decrease in the barriers score of 11.4 points—a 25 percent improvement from the baseline performance.



Information and Results of Vineland Assessments

The *Vineland-II Parent/Caregiver Rating Form* (Vineland-II), was used by parents to report their child's progress as they observe it. The tool includes a series of questions across 5 main areas: Communication, Daily Living Skills, Motor Skills, Socialization and Maladaptive Behaviors.

Questions in each category progress from relatively easy tasks such as "Identifies one or more alphabet letters as letters and distinguishes them from numbers" to more advanced items like "Follows instructions with two actions (for example, "Bring me the crayons and the paper")". This tool allows for the evaluation of real-world skills through the parent/caregiver's observations.
From the cohort enrolled in the program from the October 2012 application period, 110 children had both a baseline and 6-month assessment completed for inclusion in this report.

The results show that parents/caregivers observed meaningful increases in their child's ability to function in various areas of daily living. In addition, a notable decrease in negative behaviors was observed.

Parental Observations – Vineland Assessment Results			
Major Skill Areas	**Baseline**	**6 Month Assessment**	**Percentage Change**
Communication	65.9	81.8	24%
Daily Living Skills	47.2	58.8	25%
Socialization	56.2	70.8	26%
Motor Skills	93.9	106.0	13%
Maladaptive Behavior[8]	26.1	24.0	-8%

Treatment Effectiveness - Empirical Studies related to Treatment of ASD

As discussed previously, the Department reviewed reports completed by the National Autism Center, *The National Standards Report, 2009 and 2012*. These reports are the result of the *National Standards Project* which addresses the need for evidence-based practice guidelines for ASDs.[9] The Reports compiled findings from a variety of empirical studies and categorized different treatment modalities to fit into one of three categories: "*Established Treatments*", "*Emerging Treatments*", and "*Unestablished Treatments*". Overwhelmingly, treatments categorized as *Established Treatments* included concepts of ABA.

A recent study, *Narrowing the Gap: Effects of Intervention on Developmental Trajectories in Autism*[10]*,* reports*:*

> *Our analysis shows that Early Intensive Behavioral Intervention (EIBI) helps children acquire skills faster, thus moving their level of functioning closer to their typically developing peers, narrowing the gap between them. Children in EIBI exhibited significantly faster learn rates, both in IQ (75% faster) and in adaptive behaviors (38% faster), compared to children in a control group. This finding is consistent with previous research using standard scores as the dependent variable (e.g. Eldevik et al., 2010).*

Additional Policy Questions

If the Program is Authorized Beyond the Pilot, should the Waiver cover Autism Treatments other than ABA?

During the pilot period, some stakeholders suggested that treatments other than ABA should be included in the service package. An example of a different type of ASD treatment is Floortime. Floortime is considered a "Developmental Relationship-based Treatment". The National Autism Center, produced an updated report in 2012, The National Standards Report, 2012. This report lists Developmental Relationship-based Treatment as an *emerging treatment* rather than an *established treatment*. The Department recommends maintaining the

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[8] A decrease in the percentage of maladaptive behaviors is a favorable measurement showing a reduction in the number of negative behaviors exhibited.

[9] http://www.nationalautismcenter.org/pdf/NAC%20Standards%20Report.pdf

[10] Klintwall, L., Eldevick, S. & Eikeseth, S. (November 2013) Narrowing the gap: Effects of Intervention on Developmental Trajectories in Autism. *Autism: International Journal of Research and Practice. DOI: 10.1177/1362361313510067*

standard of only authorizing treatments that have been categorized as established. As treatments are added to the list of established treatments, the additional treatment modalities can be added to the types of treatments allowed to be covered as Waiver services.

If the Program is Authorized Beyond the Pilot, should the provider qualifications be amended to authorize professionals other than BCBAs or licensed psychologists to provide ABA and supervise direct-service workers?
During the pilot period, some stakeholders suggested that professionals other than BCBAs or licensed psychologists should be authorized to enroll as Consultant level ABA service providers. Some examples of the potential providers are, Speech Therapists, Advanced Practice Nurses, Clinical Social Workers and Occupational Therapists. The argument for allowing these additional professionals is that these providers, who are typically masters prepared, in specific circumstances, have acquired vast experience in working with children with ASD and provide ABA types of treatments. During program development, the Workgroup acknowledged the skill and professionalism of these individuals who are currently working with children with ASD and discussed the option of allowing these professionals, if they validated a set number of hours working with children with ASD (similar to the 1500 hours of field-work that is required for BCBA providers to get their certification) to be authorized service providers. Ultimately the Department decided against allowing other types of treating professionals due to the concern that credentialing the individuals as qualified to provide the services would be challenging. The Department views the ability to have a certified provider, who is credentialed by entities external to State agencies to be the preferred method of assuring provider qualifications and thus recommends maintaining the current provider qualification requirements.

If the Program is Authorized Beyond the Pilot, should the Waiver cover a broader array of services such as Speech Therapy, Physical Therapy or Message Therapy?
During the pilot period, some stakeholders suggested that services other than ABA and Respite should be added to the services authorized under the waiver. During program development, the Workgroup decided that limiting coverage to the required ABA-type services and a minimal amount of Respite services would address the most critical needs of the child without increasing the cost per child. The stated goal was to authorize a limited but effective service package that would allow more children to be served rather than providing a more robust service package that would allow fewer children to be served. The Department does not recommend adding additional services to the Waiver.

If the Program is Authorized Beyond the Pilot, should changes be made to allow an enhanced rate to be made for services provided in rural areas?
The Department received ongoing feedback from ABA providers that the time and travel costs involved with providing services in rural areas were not being covered by the current payment rate. The Department recommends working with its rate-setting staff and the providers to determine a feasible way to address this issue. Possible options may be to pay an enhanced rural rate or some type of mileage differential rate.

Conclusion

The Medicaid Autism Waiver has successfully provided services to over 300 children with ASD statewide. Outcome results from standardized evaluation tools were positive and showed the acquisition of new skills during the pilot program. Preliminary service utilization is lower than anticipated but the Department anticipates utilization will increase as the provider infrastructure more fully matures. Re-evaluation of rates for services provided in rural areas is recommended if the program is authorized to continue. The Department appreciates the opportunity to report on the Medicaid Autism Waiver pilot.