



The Hilltop Institute

analysis to advance the health of vulnerable populations

Medicaid Long-Term Supports and Services in Maryland: The Autism Waiver

A Chart Book

December 14, 2009

*Prepared for:
Maryland Department of Health and Mental Hygiene*



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Introduction

This chart book provides information about Maryland Medicaid participants who receive services through the Autism Waiver program. The Medicaid Autism Waiver provides home and community-based services to children aged 1 through 21 years with Autism Spectrum Disorder. Administered by the Maryland State Department of Education, the Autism Waiver is authorized under Section 1915(c) of the Social Security Act and approved by the federal Centers for Medicare and Medicaid Services.

Services available through the waiver include:

- Environmental Accessibility Adaptations
- Family Training
- Individual Support Services
- Residential Habilitation
- Respite Care
- Supported Employment
- Therapeutic Integration

Waiver participants are also entitled to receive other services under the Maryland Medicaid State Plan.

The Autism Waiver program currently receives funding to support an active enrollment of 900 participants.

Introduction *continued*

This chart book summarizes demographic, service utilization, and expenditure data for the Autism Waiver for state fiscal years (FYs) 2002 through 2008. The data are presented through a series of figures that illustrate trends in Autism Waiver utilization, along with accompanying narrative text. Highlights of the data include:

- The Autism Waiver served a total of 900 participants in FY 2008. The number of participants has been relatively stable since FY 2004.
- The waiver population is aging. The mean age of waiver participants increased from 9.4 years in FY 2002 to 13.1 years in FY 2008. The percentage of participants in the 16-21 age group increased from 12% in FY 2002 to 29% in FY 2008.
- In FY 2008, 79% of waiver participants were male. More than half of waiver participants were White, and one-quarter were Black.
- Average annual waiver expenditures per participant were \$28,313 in FY 2008.
- In FY 2008, average annual waiver expenditures for waiver participants who were also enrolled in the Medicaid Rare and Expensive Case Management (REM) Program were \$8,675 higher than for waiver participants not enrolled in the REM Program.
- Total Medicaid expenditures for Autism Waiver participants peaked at \$37.5 million in FY 2004, declined to \$27.5 million in FY 2005, and rose again, reaching \$36.4 million in FY 2008. The increase in expenditures in FY 2004 was largely the result of increased utilization of habilitation and individual support services. A CMS directive effective October 1, 2004, ended expenditures for school-based intensive and regular day habilitation, which was the primary reason for the drop in expenditures from FY 2004 to FY 2005.
- In FY 2008, 88% of waiver participants used intensive individual support services—the most widely used waiver service—and expenditures for this service totaled \$17.9 million.
- Capitation payments to HealthChoice managed care organizations (MCOs) accounted for 48% of Medicaid non-waiver expenditures.

Chart Book Organization

The data presented in this chart book are organized into six sections.

- **Demographics:** This section includes data on the number of Autism Waiver participants with breakdowns by age, race, gender, and county and region of residence. It also contains data on the settings from which individuals entered the waiver program and prior Medicaid coverage.
- **REM Participants:** This section presents information about population size and expenditures for Autism Waiver participants who are enrolled in the case management program for individuals with specified, complex diagnoses.
- **Medicaid Expenditures:** This section provides data on expenditures for Medicaid waiver, Medicaid non-waiver, and pharmacy services that are received by participants in the Autism Waiver program.
- **Waiver Expenditures and Service Utilization:** This section contains information about the types of services received under the Autism Waiver program and expenditures for those services.
- **Medicaid Non-Waiver Services and Expenditures:** This section contains information about Medicaid services received by participants in the Autism Waiver program that are provided outside of the waiver.
- **HealthChoice Utilization and Capitation Payments:** This section addresses the number and percentage of Autism Waiver participants who are enrolled in Maryland's Medicaid managed care program, as well as expenditures for the services rendered.

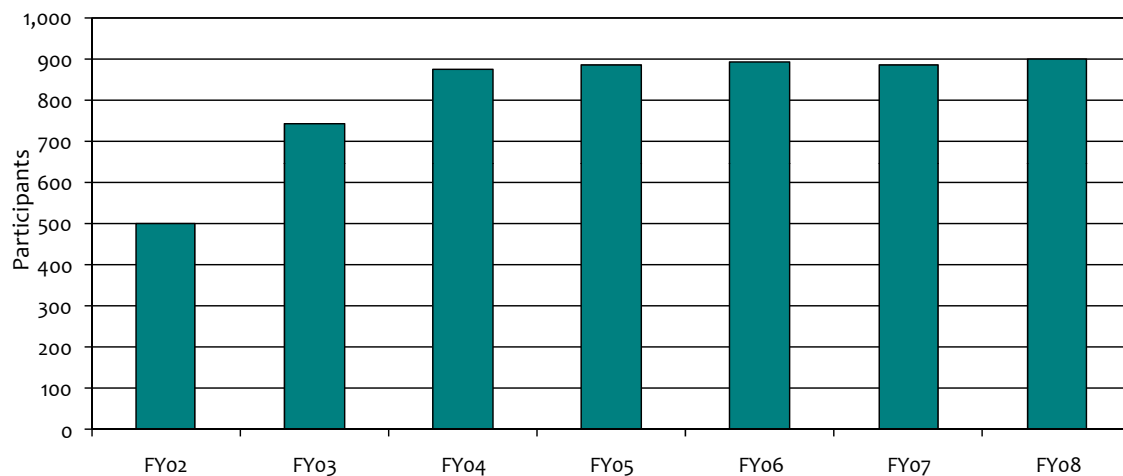
Data Sources

The information in this chart book was derived from two data sources.

- **Maryland Department of Health and Mental Hygiene, Medicaid Management Information System (MMIS2):** This system contains person-level data for all individuals eligible for Medicaid services in Maryland during the relevant fiscal year, including Medicaid eligibility category and fee-for-service claims.
- **Maryland Department of Health and Mental Hygiene, Decision Support System (DSS):** This system provides summary reports based on MMIS2 files and functions as a data book for figures in this chart book derived from the DSS.

Demographics

Figure 1. Number of Unduplicated Autism Waiver Participants*

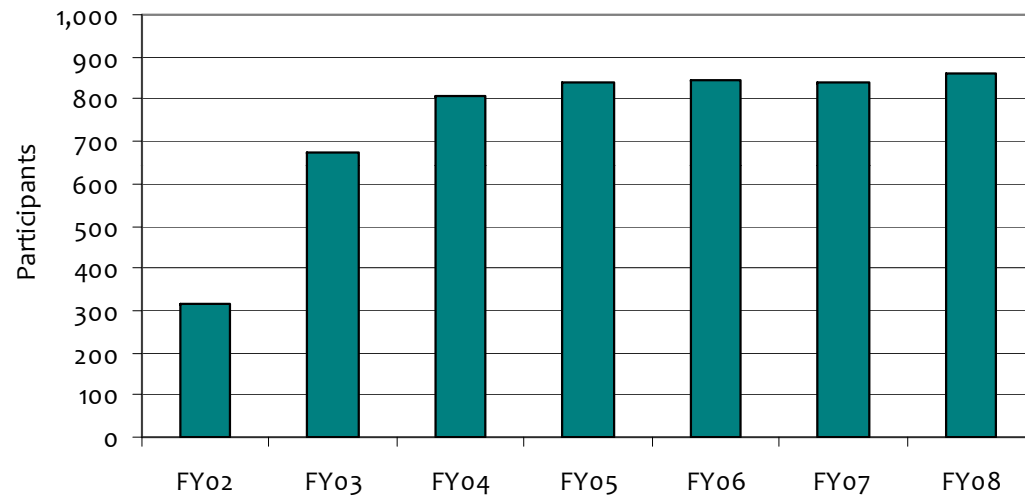


* Number of unduplicated individuals is the total number of persons enrolled in a waiver program who were eligible for Medicaid coverage during the fiscal year.

Source: DSS

The number of waiver participants remained relatively stable from FY 2004 to FY 2008.

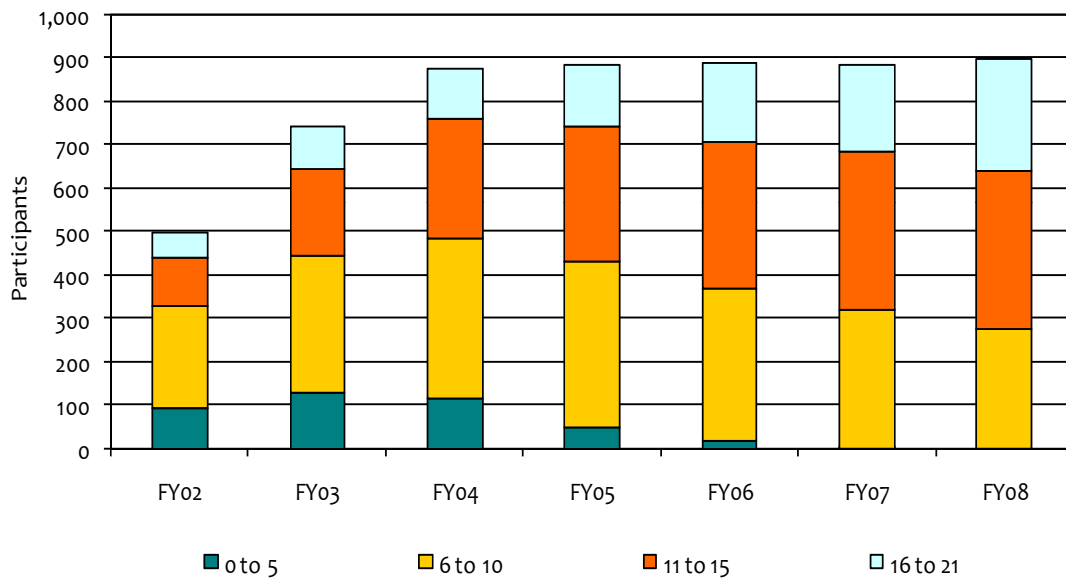
Figure 2. Average Number of Autism Waiver Participants per Month



Source: DSS

The total number of Autism Waiver participants enrolled in the waiver during FY 2008 was 900. However, there was an average of 863 participants enrolled in the waiver each month during this period.

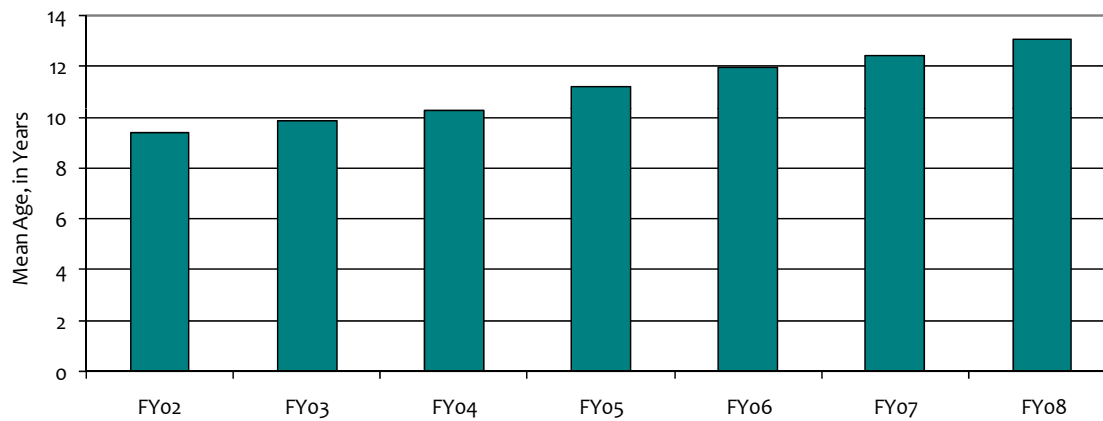
Figure 3. Autism Waiver Participants, by Age Group



Source: DSS

The waiver population aged. The percentage of waiver participants in the 11-15 age group increased from 22% in FY 2002 to 41% in FY 2008. The percentage of waiver participants in the 16-21 age group increased from 12% in FY 2002 to 29% in FY 2008.

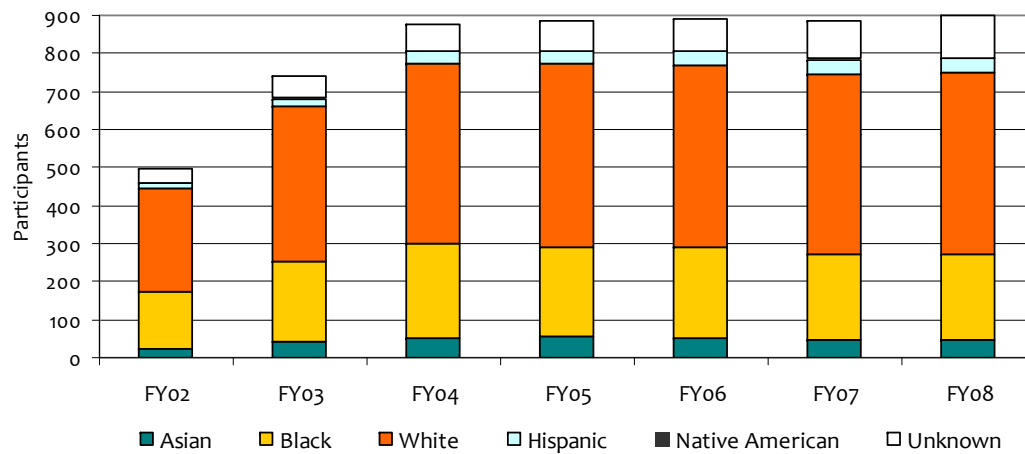
Figure 4. Mean Age of Autism Waiver Participants



Source: DSS

The mean age of waiver participants increased from 9.4 years in FY 2002 to 13.1 years in FY 2008.

Figure 5. Autism Waiver Participants, by Race



Source: DSS

From FY 2004 to FY 2008, there was little variation in the race of waiver participants.

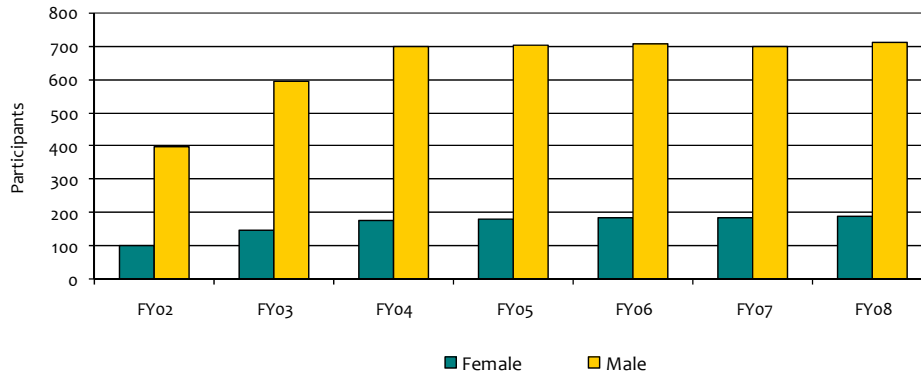
From FY 2002 to FY 2008, more than half of waiver participants were White. Black participants made up the next largest group, although participation by this group exhibited a slight but steady decline from 30% in FY 2002 to 25% in FY 2008.

Figure 6. Autism Waiver Participants, by Gender

Gender	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Female	102	147	177	181	185	185	188
Male	397	595	699	704	707	700	712
Total	499	742	876	885	892	885	900

Source: DSS

Figure 7. Autism Waiver Participants, by Gender



Source: DSS

On average, the number of males in the waiver has consistently outnumbered the number of females by a ratio of 4 to 1.

Figure 8. Number of Autism Waiver Participants, by County

County	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Alleghany	1	2	3	2	2	2	2
Anne Arundel	58	80	73	70	72	66	67
Baltimore City	64	87	98	100	98	89	91
Baltimore County	51	79	111	115	117	116	121
Calvert	15	16	16	15	14	13	12
Caroline	0	1	0	0	1	1	2
Carroll	8	15	17	20	18	20	21
Cecil	1	2	3	2	1	2	2
Charles	7	9	12	12	10	11	11
Dorchester	0	1	1	2	2	2	3
Frederick	2	28	39	45	52	52	57
Garrett	1	1	2	2	1	1	1
Harford	20	38	47	49	51	53	53
Howard	37	54	62	67	68	67	73
Kent	0	0	0	0	1	2	2
Montgomery	106	151	178	179	185	192	192
Prince George's	79	116	141	129	127	128	125
Queen Anne's	0	1	2	4	3	2	1
Somerset	0	0	1	1	1	1	1
St. Mary's	2	3	4	6	5	5	5
Talbot	1	2	4	4	2	2	2
Washington	24	30	33	36	36	36	36
Wicomico	13	14	14	11	10	10	9
Worcester	8	11	12	12	12	10	9
Out of State*	1	1	3	2	3	2	2
Total	499	742	876	885	892	885	900

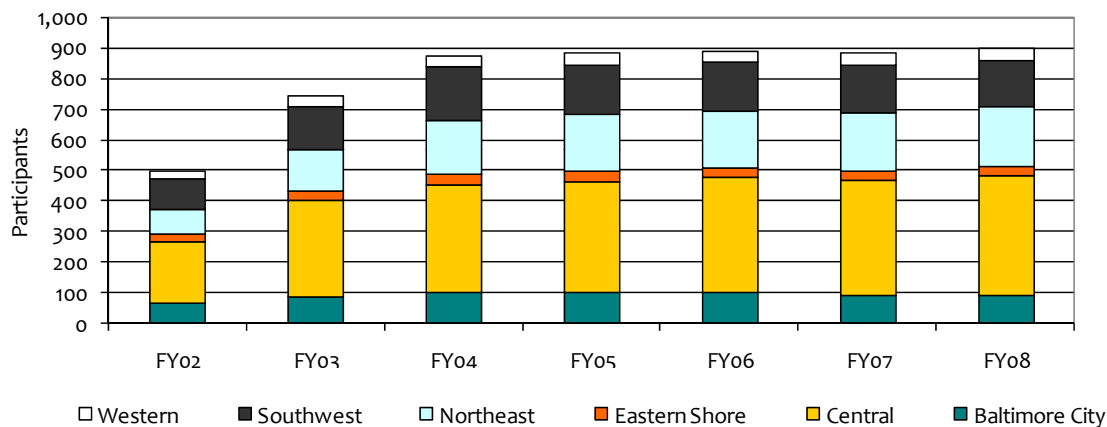
* "Out of State" category includes persons residing in Maryland near the state line with an out-of-state postal facility code. Periodically these individuals are manually assigned to the appropriate county.

Source: DSS

Montgomery, Prince George's, and Baltimore Counties consistently had the largest number of waiver participants, accounting for 49% of all waiver participants in FY 2008.

Ten counties had less than ten waiver participants enrolled each fiscal year.

Figure 9. Autism Waiver Participants, by Region*



Enrollment in each of the regions remained relatively stable from FY 2004 to FY 2008. In FY 2008, the largest number of waiver participants resided in the Central region, while the smallest number of waiver participants resided on the Eastern Shore.

* This chart book uses the following regions: Baltimore City, *Central* (Anne Arundel, Frederick, Howard, and Montgomery Counties), *Eastern Shore* (Caroline, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, Wicomico, and Worcester Counties), *Northeast* (Baltimore, Carroll, Cecil, and Harford Counties), *Southwest* (Calvert, Charles, Prince George’s, and St. Mary’s Counties), and *Western* (Allegany, Garrett, and Washington Counties).

Source: DSS

Figure 10. Autism Waiver Participants, by Region*

Region*	FY02		FY03		FY04		FY05		FY06		FY07		FY08	
	Number/ Percent		Number/ Percent		Number/ Percent		Number/ Percent		Number/ Percent		Number/ Percent		Number/ Percent	
Baltimore City	64	13%	87	12%	98	11%	100	11%	98	11%	89	10%	91	10%
Central	203	41%	313	42%	352	40%	361	41%	377	42%	377	43%	389	43%
Eastern Shore	22	4%	30	4%	34	4%	34	4%	32	4%	30	3%	29	3%
Northeast	80	16%	134	18%	178	20%	186	21%	187	21%	191	22%	197	22%
Southwest	103	21%	144	19%	173	20%	162	18%	156	18%	157	18%	153	17%
Western	26	5%	33	4%	38	4%	40	5%	39	4%	39	4%	39	4%
Out of State**	1	<1%	1	<1%	3	<1%	2	<1%	3	<1%	2	<1%	2	<1%
Total	499	100%	742	100%	876	100%	885	100%	892	100%	885	100%	900	100%

The Central region consistently had the largest number of waiver participants. In FY 2008, this region accounted for 43% of all waiver participants.

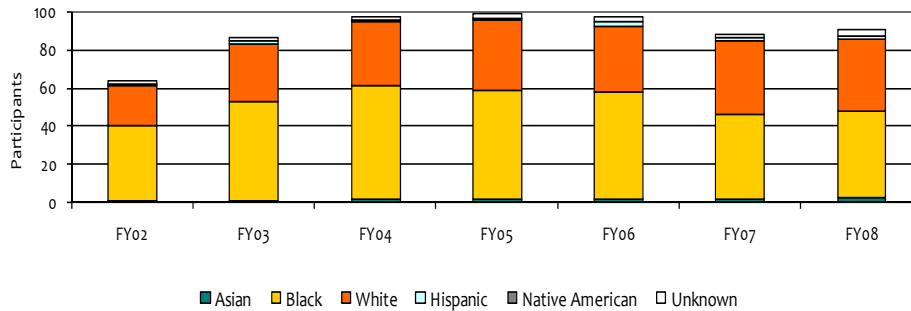
In FY 2008, the Western and Eastern Shore regions had the smallest percentages of waiver participants at 4% and 3%, respectively.

* This chart book uses the following regions: Baltimore City, Central (Anne Arundel, Frederick, Howard, and Montgomery Counties), Eastern Shore (Caroline, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, Wicomico, and Worcester Counties), Northeast (Baltimore, Carroll, Cecil, and Harford Counties), Southwest (Calvert, Charles, Prince George’s, and St. Mary’s Counties), and Western (Allegany, Garrett, and Washington Counties).

** “Out of State” category includes persons residing in Maryland near the state line with an out-of-state postal facility code. Periodically these individuals are manually assigned to the appropriate county.

Source: DSS

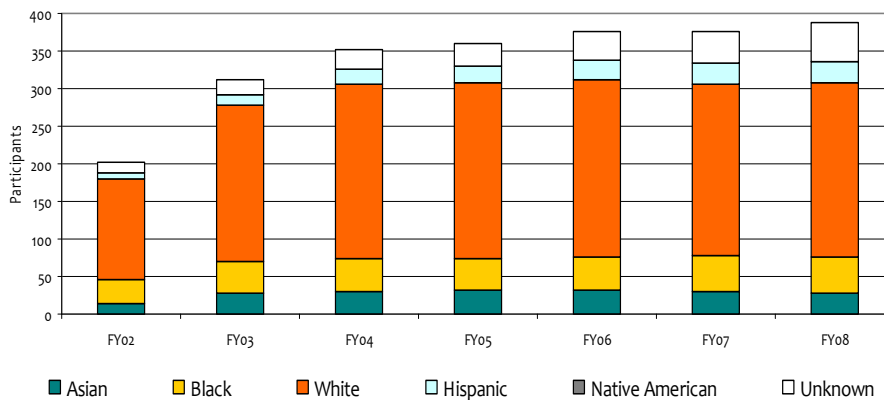
Figure 11. Autism Waiver Participants, by Race in Baltimore City



Note: There were no Native American participants in Baltimore City from FY 2002 to FY 2008.

Source: DSS

Figure 12. Autism Waiver Participants, by Race in the Central Region



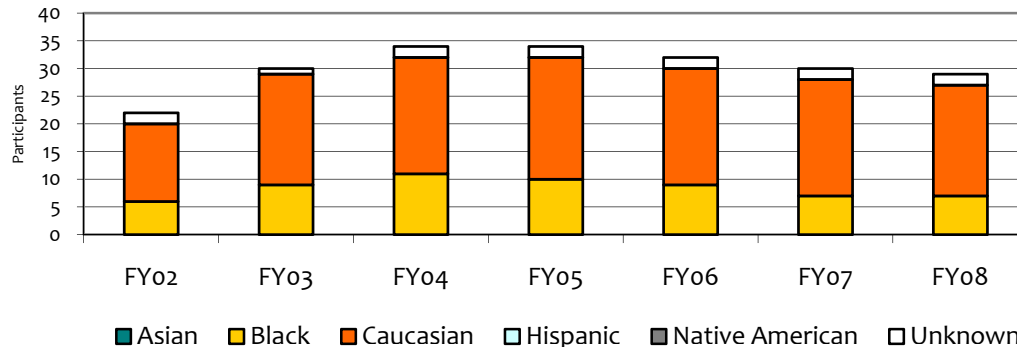
Note: The Central Region includes Anne Arundel, Frederick, Howard, and Montgomery Counties. There were no Native American participants in the Central Region from FY 2002 to FY2008.

Source: DSS

From FY 2002 to FY 2008, the racial composition of waiver participants varied by region but was relatively stable within each region.

In FY 2008 in Baltimore City, 49% of waiver participants were Black and 42% were White. In that same year in the Central Region, 13% of waiver participants were Black and 60% were White.

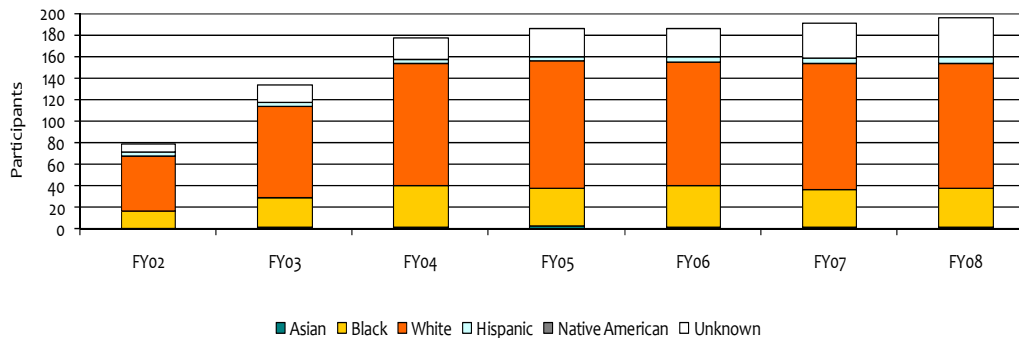
Figure 13. Autism Waiver Participants, by Race in the Eastern Shore Region



Note: The Eastern Shore Region consists of the following counties: Caroline, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, Wicomico, and Worcester. There were no Asian, Hispanic, or Native American participants in the Eastern Shore Region from FY 2002 to FY 2008.

Source: DSS

Figure 14. Autism Waiver Participants, by Race in the Northeast Region



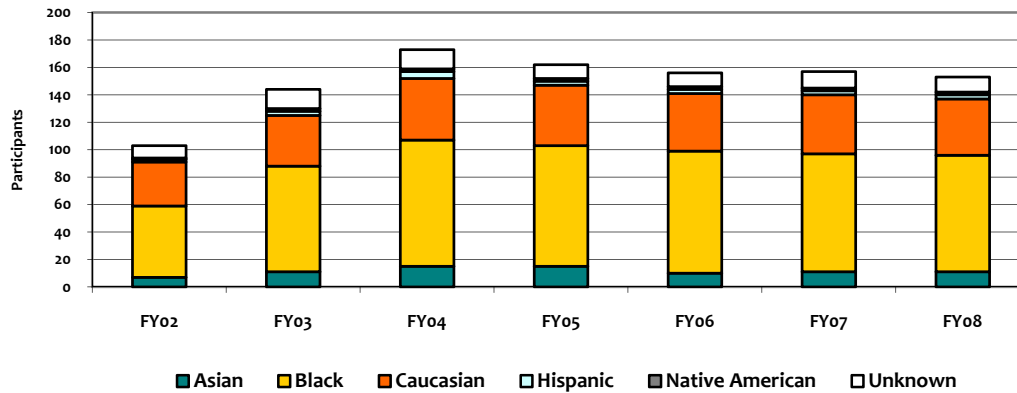
Note: The Northeast Region consists of the following counties: Baltimore, Carroll, Cecil, and Harford. There were no Native American participants in the Northeast Region from FY 2002 to FY 2008.

Source: DSS

In FY 2008 in the Eastern Shore region, 69% of waiver participants were White; in the Northeast region, 58% were White.

In FY 2008 in the Eastern Shore and Northeast regions, the majority of waiver participants were white: 69% and 58%, respectively.

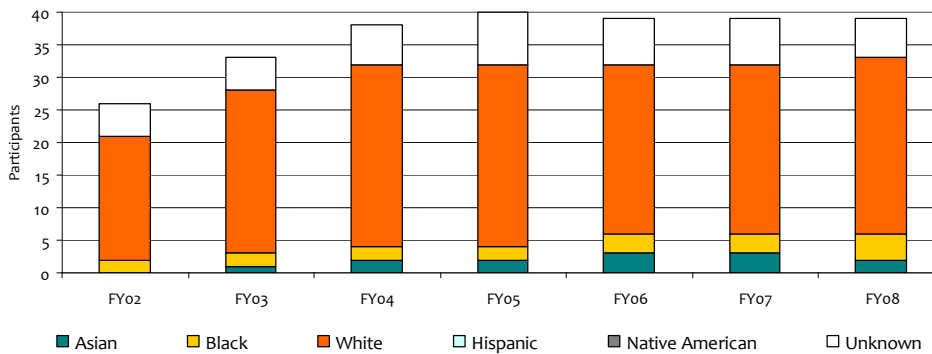
Figure 15. Autism Waiver Participants, by Race in the Southwest Region



Note: The Southwest Region includes the following counties: Calvert, Charles, Prince George’s, and St. Mary’s.

Source: DSS

Figure 16. Autism Waiver Participants, by Race in the Western Region

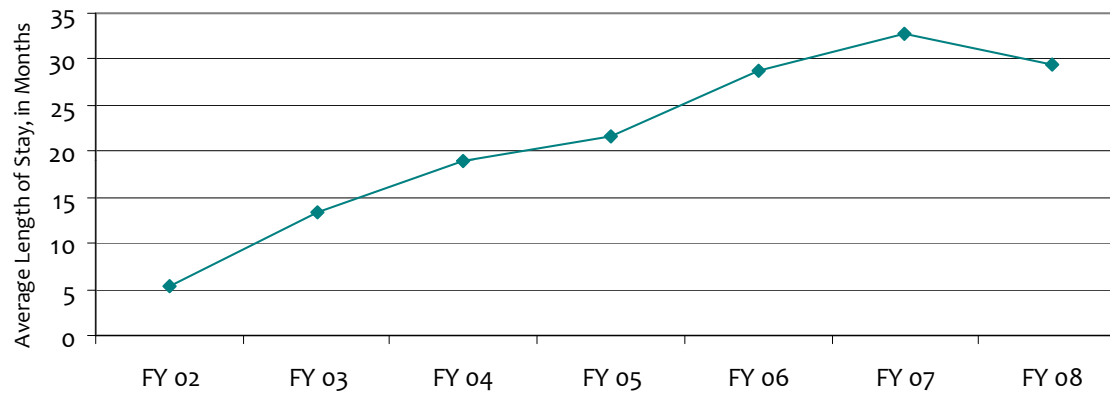


Note: The Western Region includes the following counties: Allegany, Garrett, and Washington. There were no Native American or Hispanic participants in the Western Region from FY 2002 to FY 2008.

Source: DSS

In FY 2008, the majority (56%) of waiver participants in the Southwest region were Black. In the Western region in that same year, the majority (69%) of waiver participants were White.

Figure 17. Average Length of Stay in the Autism Waiver, in Months, for Participants Leaving the Waiver



Note: Participants leaving the Autism Waiver in each fiscal year were identified using each participant's last Medicaid Autism Waiver eligibility span. Individual lengths of stay for participants leaving the waiver were calculated using the beginning date from the participant's first Autism Waiver eligibility span and the ending date from the participant's last Autism Waiver eligibility span. The lengths of stay for persons leaving the waiver in a given year were totaled and averaged to obtain the average length of stay for participants leaving the Autism Waiver in that fiscal year.

Source: MMIS2

From FY 2006 to FY 2008, the average length of stay for Autism Waiver participants who left the waiver was greater than two years, averaging 29 months in FY 2008.

In FY 2008, 14 waiver participants left the waiver. Of those, 6 were no longer financially, technically, or medically eligible for the waiver.

Figure 18. Prior Medicaid Coverage for Autism Waiver Participants

Prior Coverage Status	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Prior Coverage	87	131	180	189	195	192	201
No Prior Coverage	412	611	696	696	697	693	699
Total	499	742	876	885	892	885	900

Note: Prior Medicaid coverage group is defined as the last Medicaid coverage group assigned to each waiver participant prior to enrollment in the waiver.

Source: DSS

From FY 2002 to FY 2008, more than three-quarters of waiver participants had no prior Medicaid coverage.

REM Participants

Figure 19. Number of Autism Waiver Participants Enrolled in the REM Program

	FY02	FY03	FY04	FY05	FY06	FY07	FY08
REM Participants	3	5	9	11	13	12	13

Note: The REM Program is a Medicaid case managed, fee-for-service alternative to HealthChoice MCO participation for individuals with specified rare and expensive conditions. Source: DHMH Long Term Care Program, REM Program, available at <http://www.dhmh.state.md.us/mma/longtermcare/html/REM-information.htm>

Source: MMIS2

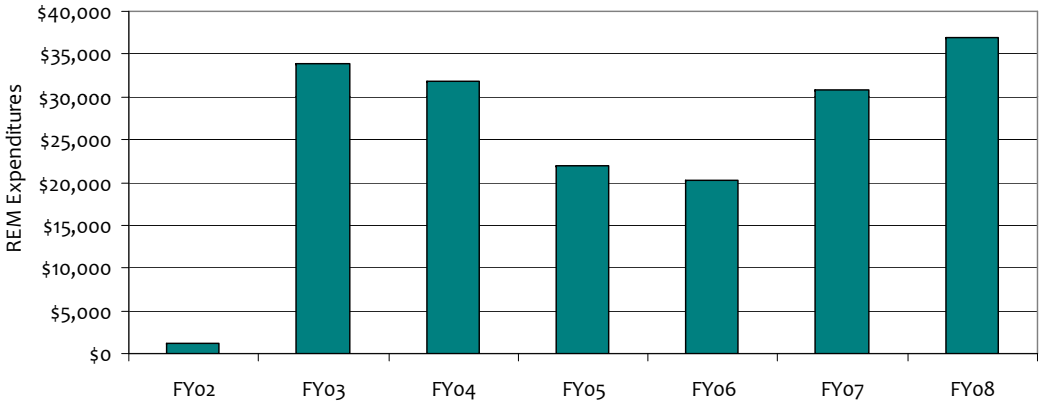
Figure 20. Medicaid Waiver Expenditures for Autism Waiver Participants Enrolled in the REM Program

	FY02	FY03	FY04	FY05	FY06	FY07	FY08
REM Program Expenditures	\$3,644	\$168,961	\$287,177	\$241,337	\$262,785	\$369,244	\$479,206

Source: MMIS2

In FY 2008, 13 Autism Waiver participants were enrolled in the REM program. While the number of waiver participants enrolled in REM remained relatively stable from FY 2005 to FY 2008, expenditures for this group nearly doubled during this time (from \$241,337 to \$479,206, respectively).

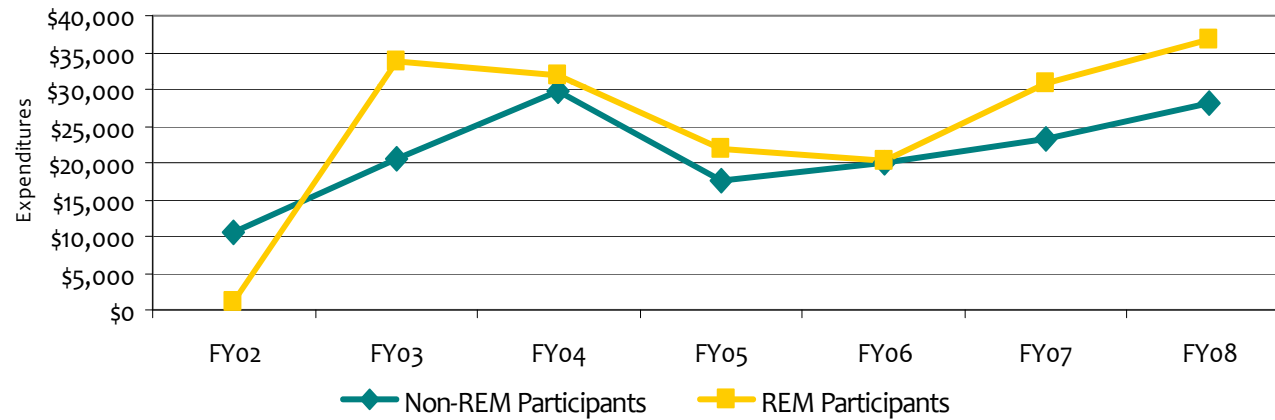
Figure 21. Average Annual Waiver Expenditures per Person for Autism Waiver Participants Enrolled in the REM Program



Source: MMIS2

Average annual waiver expenditures for REM program participants nearly doubled from \$20,000 in FY 2006 to \$36,000 in FY 2008.

Figure 22. Comparison of Average Annual Waiver Expenditures for Autism Waiver Participants Enrolled and Not Enrolled in the REM Program



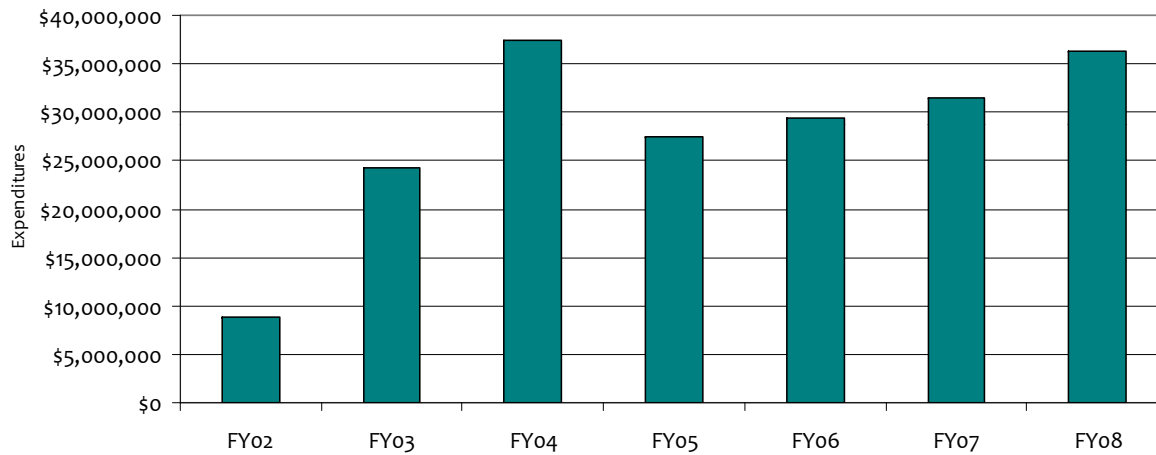
Sources: DSS, MMIS2

From FY 2004 to FY 2006, average annual Autism Waiver expenditures for REM participants were only slightly higher than average annual waiver expenditures for those not enrolled in REM.

By FY 2008, average annual waiver expenditures for REM participants had grown to more than \$36,000, \$8,675 higher than average annual waiver expenditures for non-REM participants.

Medicaid Expenditures

Figure 23. Total Medicaid Expenditures for Autism Waiver Participants



Note: Total Medicaid expenditures are defined as all Medicaid waiver expenditures, Medicaid non-waiver expenditures, and pharmacy expenditures paid to service providers by Medicaid on behalf of Autism Waiver participants.

Source: DSS

Total Medicaid expenditures for waiver participants reached a high of \$37.5 million in FY 2004, declined to \$27.5 million in FY 2005, and then rose steadily, reaching \$36.4 million in FY 2008. Enrollment in the Autism Waiver was relatively stable during this period, ranging from 876 participants in FY 2004 to 900 participants in FY 2008.

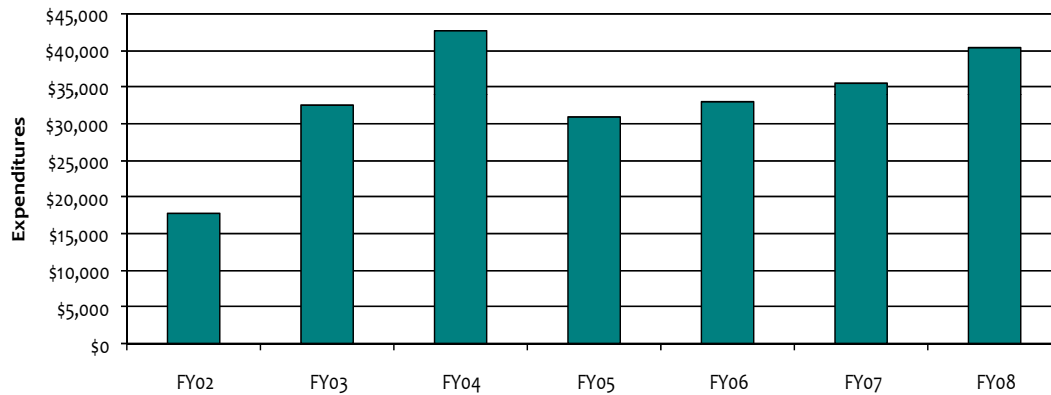
Figure 24. Total Medicaid Expenditures for Autism Waiver Participants, by Service Category

Service Category	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Waiver Expenditures	\$5,181,316	\$15,326,215	\$25,994,489	\$15,575,134	\$17,746,894	\$20,776,216	\$25,481,396
Non-Waiver Expenditures	\$3,474,630	\$8,287,173	\$10,578,040	\$10,807,168	\$10,286,347	\$9,232,174	\$9,228,599
Pharmacy	\$169,307	\$587,215	\$882,216	\$1,083,105	\$1,363,671	\$1,483,589	\$1,668,757
Total	\$8,825,253	\$24,200,604	\$37,454,745	\$27,465,407	\$29,396,912	\$31,491,979	\$36,378,752

Source: DSS

The sharp increase in total Medicaid expenditures for waiver participants in FY 2004 can be attributed primarily to a 70% increase in waiver expenditures from FY 2003 (\$15,326,215) to FY 2004 (\$25,994,489).

Figure 25. Average Annual Total Medicaid Expenditures per Person for Autism Waiver Participants

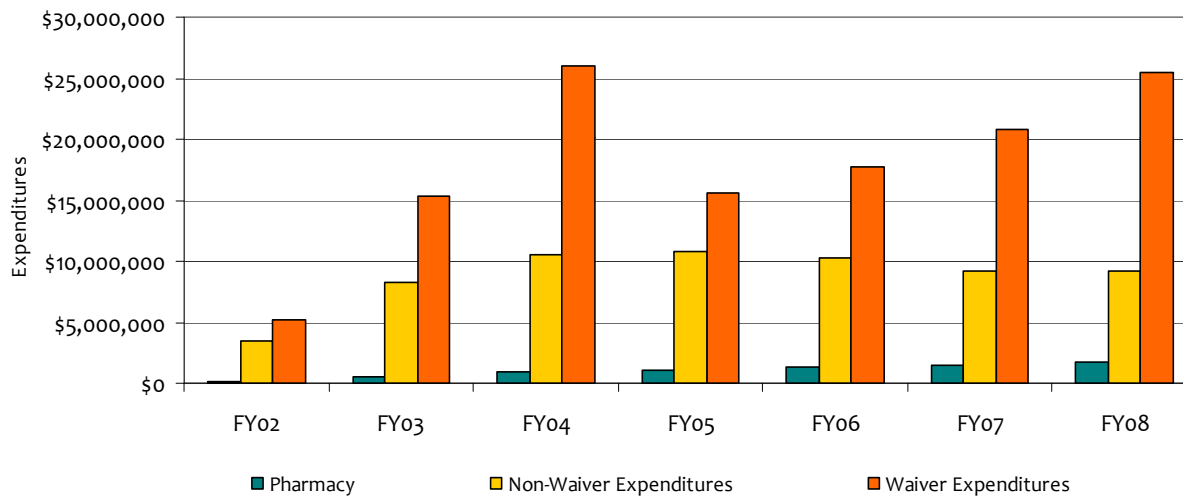


The average annual total Medicaid expenditures for waiver participants reached a high of \$42,757 in FY 2004, declined to \$31,024 in FY 2005, and then rose steadily, reaching \$40,421 in FY 2008.

Note: Total Medicaid expenditures are defined as all Medicaid waiver expenditures, Medicaid non-waiver expenditures, and pharmacy expenditures paid to service providers by Medicaid on behalf of Autism Waiver participants.

Source: DSS

Figure 26. Total Medicaid Expenditures for Autism Waiver Participants, by Service Category

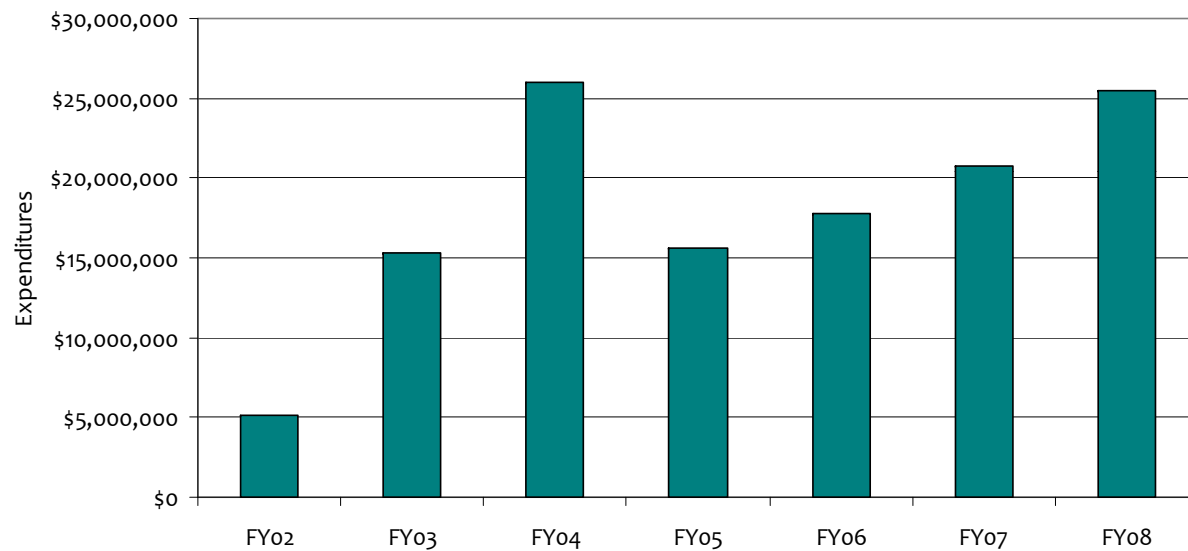


Source: DSS

In FY 2008, expenditures for waiver services comprised 70% of total Medicaid expenditures for waiver participants. Non-waiver expenditures and pharmacy expenditures represented 25% and 5%, respectively, of total spending.

Waiver Expenditures and Service Utilization

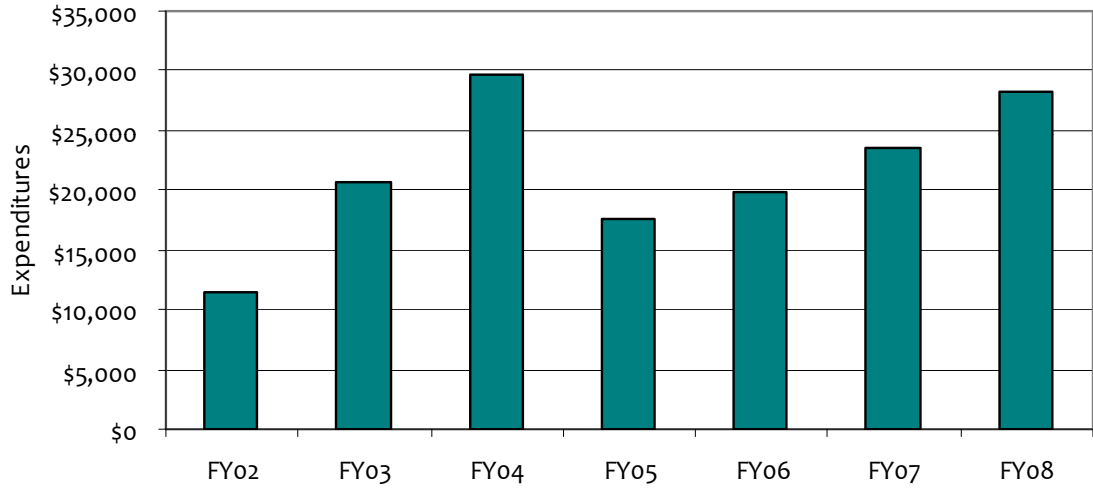
Figure 27. Medicaid Expenditures for Autism Waiver Services



Source: DSS

The 70% increase in waiver expenditures from FY 2003 to FY 2004 was largely due to an increase in utilization of habilitation and support services (see Figure 30). In FY 2005, waiver expenditures dropped back to FY 2003 levels, only to begin a steady rise that continued through FY 2008.

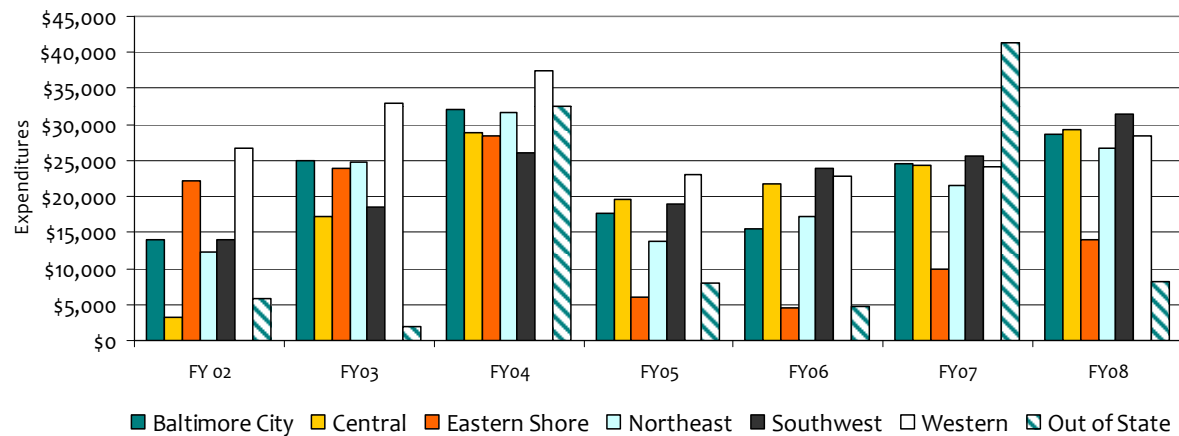
Figure 28. Average Annual Autism Waiver Service Expenditures per Person



Source: DSS

Average annual waiver expenditures per participant increased steadily from FY 2005 to FY 2008. Most recently, average per person expenditures increased by 21%, from \$23,476 in FY 2007 to \$28,313 in FY 2008.

Figure 29. Average Annual Autism Waiver Service Expenditures per Person, by Region



With the exception of the Eastern Shore region, there was little variation in regional average annual per person waiver expenditures from FY 2005 to FY 2008.

Note: This chart book uses the following regions: Baltimore City, Central (Anne Arundel, Frederick, Howard, and Montgomery Counties), Eastern Shore (Caroline, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, Wicomico, and Worcester Counties), Northeast (Baltimore, Carroll, Cecil, and Harford Counties), Southwest (Calvert, Charles, Prince George’s, and St. Mary’s Counties), and Western (Allegany, Garrett, and Washington Counties).

“Out of State” category includes expenditures for persons residing in Maryland near the state line with an out-of-state postal facility code. Periodically, these individuals are manually assigned to the appropriate county.

Source: DSS

Figure 30. Medicaid Expenditures for Autism Waiver Services

Autism Waiver Service	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Environmental Accessibility Adaptation	\$0	\$29,529	\$68,007	\$47,621	\$50,979	\$53,619	\$82,153
Family Training	\$3,608	\$97,618	\$620,099	\$984,357	\$1,287,976	\$1,388,667	\$1,612,896
Intensive Day Habilitation*	\$3,211,242	\$7,213,738	\$9,030,953	\$1,196,353	\$0	\$0	\$0
Intensive Individual Support Services	\$35,852	\$1,269,752	\$5,611,430	\$9,768,317	\$13,363,351	\$15,633,109	\$17,904,882
Intensive Residential Habilitation	\$62,699	\$460,224	\$857,615	\$1,069,311	\$1,162,053	\$1,440,883	\$3,031,759
Regular Day Habilitation*	\$1,843,644	\$5,881,394	\$8,585,203	\$1,124,442	\$0	\$0	\$0
Regular Residential Habilitation	\$474	\$41,755	\$72,533	\$2,506	\$0	\$0	\$11,851
Respite Care	\$17,538	\$211,116	\$471,495	\$761,348	\$971,643	\$1,036,604	\$1,223,340
Supported Employment	\$0	\$83	\$87	\$0	\$0	\$0	\$578
Therapeutic Integration Services	\$2,560	\$116,900	\$673,017	\$617,862	\$908,642	\$1,219,795	\$1,601,686
Other Waiver Services**	\$3,700	\$4,108	\$4,050	\$3,017	\$2,250	\$3,539	\$12,251
Autism Waiver Service Total	\$5,181,317	\$15,326,217	\$25,994,489	\$15,575,134	\$17,746,894	\$20,776,216	\$25,481,396

* Effective October 1, 2004, CMS no longer allowed states to cover school-based Regular Day Habilitation and Intensive Day Habilitation services.

** "Other waiver services" are Medicaid waiver services that are provided during an individual's Autism Waiver span but are authorized under a different home and community-based waiver.

Source: DSS

In FY 2008, intensive individual support services accounted for 70% of waiver expenditures for Autism Waiver participants, while intensive residential habilitation services accounted for 12% of waiver expenditures.

A CMS directive ended expenditures for school-based intensive and regular day habilitation effective October 1, 2004, which was the primary reason for the sharp drop in waiver expenditures from FY 2004 to FY 2005.

Figure 31. Use of Autism Waiver Services

Service	Number of Users			Average Units Per User Per Year		
	FY07	FY08	Percent Change	FY07*	FY08†	Percent Change
Environmental Accessibility Adaptation	61	74	21%	**	**	**
Family Training	646	687	6%	23	25	9%
Intensive Individual Support Services	754	789	5%	733	783	7%
Intensive Residential Habilitation	24	29	21%	271	273	1%
Regular Residential Habilitation	0	2	-	0	53	-
Respite Care	577	614	6%	81	88	8%
Supported Employment	0	9	-	0	1	-
Therapeutic Integration Services	214	258	21%	252	268	6%

* FY 2007 Autism Waiver payment rates were used in this calculation.

† FY 2008 Autism Waiver payment rates were used in this calculation.

** Unable to calculate average units due to the unit of measure for these services (i.e., per year, per modification).

Sources: DSS, MMIS2

From FY 2007 to FY 2008, there were increases in both the number of users and the average number of units used for all waiver services.

In FY 2008, intensive individual support services, used by 88% of all participants, was the most widely used waiver service.

Figure 32. Intensive Residential Habilitation Expenditures

	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Intensive Residential Habilitation	\$62,699	\$460,224	\$857,615	\$1,069,311	\$1,162,053	\$1,440,883	\$3,031,759
Percent of Waiver Expenditures	1%	3%	3%	7%	7%	7%	12%

Intensive residential habilitation expenditures more than doubled from \$1.4 million in FY 2007 to \$3.0 million in FY 2008.

Source: DSS

Figure 33. Intensive Residential Habilitation Expenditures, by Age Group

Age Group	FY02	FY03	FY04	FY05	FY06	FY07	FY08
1 to 5	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6 to 10	\$2,331	\$46,883	\$51,832	\$9,936	\$19,255	\$37,034	\$160,657
11 to 15	\$14,504	\$251,435	\$359,129	\$592,642	\$433,939	\$522,910	\$411,292
16 to 21	\$45,864	\$161,906	\$446,654	\$466,734	\$708,859	\$880,939	\$2,459,811
Total	\$62,699	\$460,224	\$857,615	\$1,069,311	\$1,162,053	\$1,440,883	\$3,031,759

Source: DSS

From FY 2007 to FY 2008, intensive residential habilitation expenditures for waiver participants aged 16 to 21 years nearly tripled (from \$880,939 to \$2.5 million).

Figure 34. Intensive Residential Habilitation Expenditures, by Gender

Gender	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Female	\$0	\$69,501	\$85,284	\$82,170	\$36,347	\$104,557	\$182,801
Male	\$62,699	\$390,723	\$772,331	\$987,141	\$1,125,706	\$1,336,326	\$2,848,958
Total	\$62,699	\$460,224	\$857,615	\$1,069,311	\$1,162,053	\$1,440,883	\$3,031,759

Source: DSS

Intensive residential habilitation expenditures for males consistently outpaced expenditures for females. In FY 2008, 94% of these expenditures were for services provided to male participants.

Figure 35. Intensive Residential Habilitation Expenditures, by Region

Region	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Baltimore City	\$0	\$134,956	\$201,815	\$255,717	\$203,055	\$293,832	\$458,718
Central	\$20,188	\$205,580	\$337,016	\$540,811	\$765,572	\$907,772	\$1,783,370
Eastern Shore	\$2,331	\$0	\$0	\$0	\$0	\$53,222	\$126,159
Northeast	\$40,180	\$59,388	\$136,122	\$129,841	\$78,318	\$99,570	\$392,622
Southwest	\$0	\$42,009	\$120,038	\$68,165	\$78,028	\$86,486	\$270,890
Western	\$0	\$18,291	\$62,624	\$74,778	\$37,080	\$0	\$0
Total	\$62,699	\$460,224	\$857,615	\$1,069,311	\$1,162,053	\$1,440,883	\$3,031,759

Note: This chart book uses the following regions: Baltimore City, *Central* (Anne Arundel, Frederick, Howard, and Montgomery Counties), *Eastern Shore* (Caroline, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, Wicomico, and Worcester Counties), *Northeast* (Baltimore, Carroll, Cecil, and Harford Counties), *Southwest* (Calvert, Charles, Prince George’s, and St. Mary’s Counties), and *Western* (Allegany, Garrett, and Washington Counties).

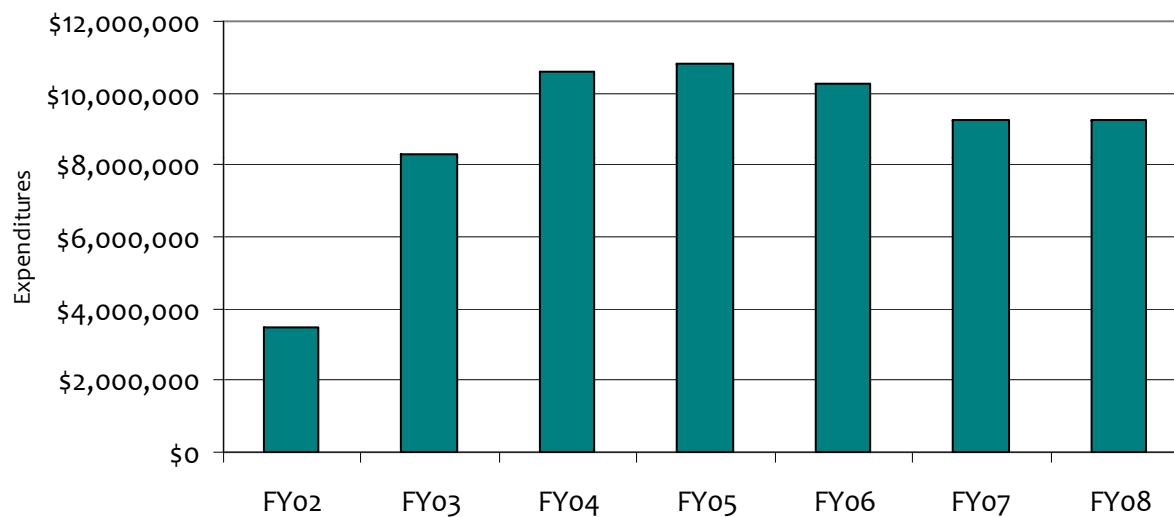
Source: DSS

From FY 2007 to FY 2008, expenditures for intensive residential habilitation in the Northeast region increased nearly fourfold. Other regions (with the exception of the Western region, which had no expenditures) experienced a doubling or tripling of expenditures for this service.

In FY 2008, the Central region accounted for 59% of intensive residential habilitation expenditures in the state.

Medicaid Non-Waiver Services and Expenditures

Figure 36. Medicaid Non-Waiver Expenditures for Autism Waiver Participants



Source: DSS

Non-waiver expenditures peaked in FY 2005 and then decreased until FY 2007, when they leveled off at \$9.2 million.

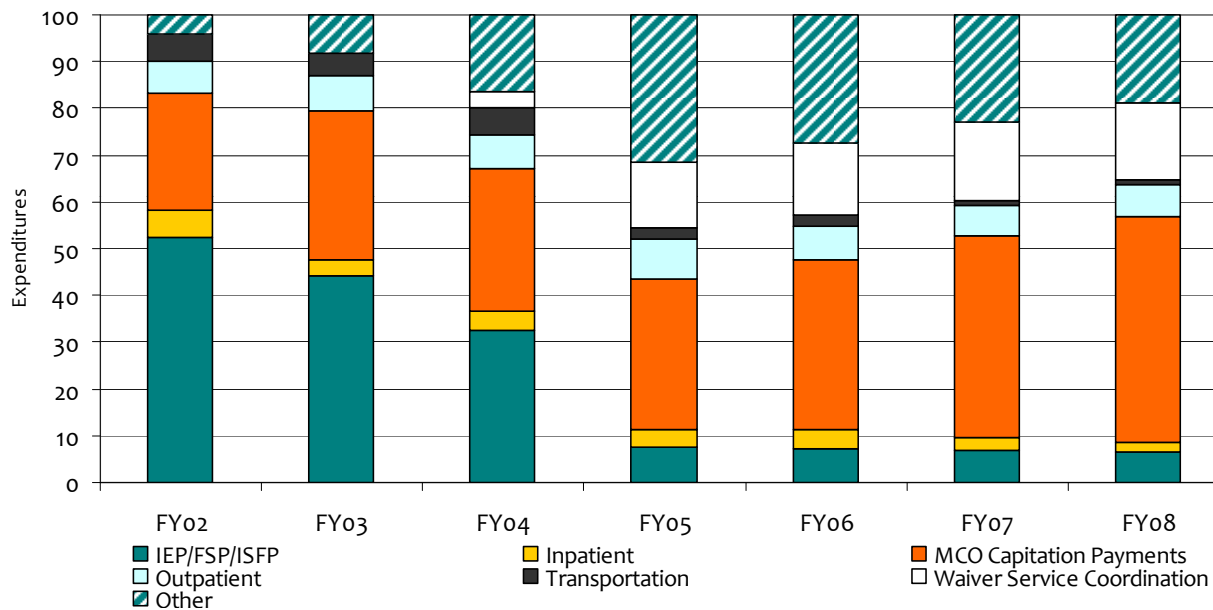
Figure 37. Medicaid Non-Waiver Expenditures for Autism Waiver Participants, by Service Category

Service	FY02	FY03	FY04	FY05	FY06	FY07	FY08
IEP/FSP/IFSP Services							
IEP Service Coordination*	\$693,500	\$1,683,900	\$1,639,275	\$0	\$0	\$0	\$0
IEP/FSP School Health-Related Services*	\$1,125,368	\$1,984,520	\$1,786,449	\$798,413	\$734,050	\$635,007	\$597,750
IFSP Case Management*	\$150	\$300	\$450	\$0	\$0	\$0	\$0
Subtotal of IEP/FSP/IFSP	\$1,819,018	\$3,668,720	\$3,426,174	\$798,413	\$734,050	\$635,077	\$597,750
Other Non-Waiver Services							
Inpatient	\$201,596	\$264,308	\$445,221	\$427,072	\$414,605	\$241,065	\$200,245
MCO Capitation Payments**	\$875,398	\$2,651,591	\$3,224,250	\$3,491,561	\$3,738,786	\$3,994,017	\$4,436,900
Outpatient	\$232,099	\$632,548	\$773,079	\$908,232	\$744,059	\$609,263	\$634,290
Transportation	\$201,100	\$397,875	\$601,524	\$244,013	\$236,525	\$100,463	\$113,038
Waiver Service Coordination	\$0	\$0	\$377,982	\$1,547,650	\$1,593,400	\$1,527,325	\$1,493,050
Other***	\$145,418	\$672,131	\$1,729,810	\$3,390,228	\$2,824,922	\$2,124,965	\$1,753,325
Total	\$3,474,630	\$8,287,174	\$10,578,040	\$10,807,168	\$10,286,347	\$9,232,174	\$9,228,598

Note: Beginning in April 2004, the billing codes for IEP Service Coordination and IFSP Case Management were changed. These services are now billed under waiver service coordination.
 * Individualized Education Program (IEP) Service Coordination, IEP/ Family Support Program (FSP) School Health-Related Services, Individualized Service Family Plan (ISFP) Case Management
 ** "MCO" capitation payments are fixed monthly amounts paid to MCOs to provide services to enrolled Medicaid participants. Capitation payments are based on actuarial projections of medical utilization. MCOs are required to provide all covered, medically necessary Medicaid services within that capitated amount.
 *** "Other" includes Medicaid non-waiver services other than those listed above and those provided under the waiver that are paid by Medicaid on behalf of Medicaid waiver participants.
 Source: DSS

In FY 2008, capitation payments to HealthChoice MCOs accounted for 48% (\$4,436,900) of Medicaid non-waiver expenditures for Autism Waiver participants.

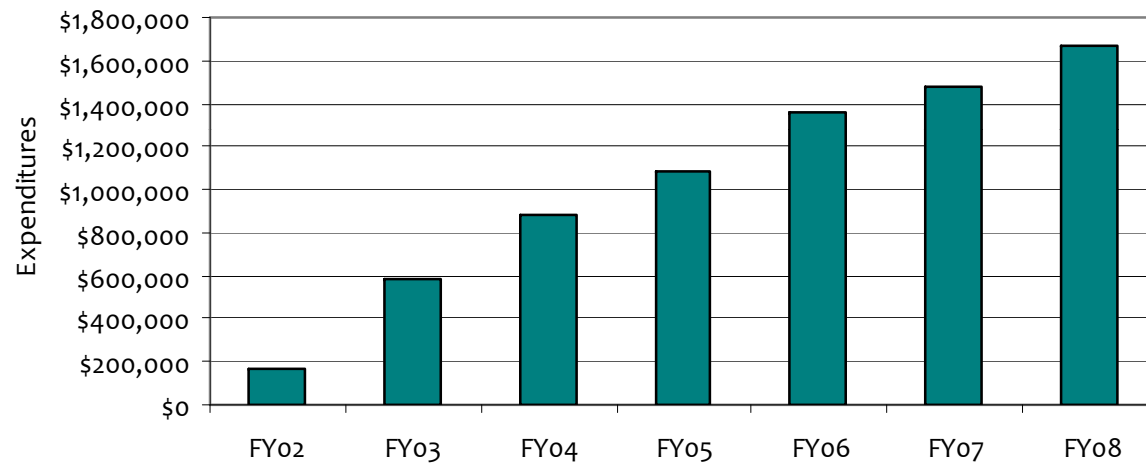
Figure 38. Percentage of Medicaid Non-Waiver Expenditures, by Service Category



From FY 2005 to FY 2008, the share of non-waiver expenditures dedicated to capitation payments to HealthChoice MCOs for Autism Waiver participants increased steadily.

Source: DSS

Figure 39. Pharmacy Expenditures for Autism Waiver Participants

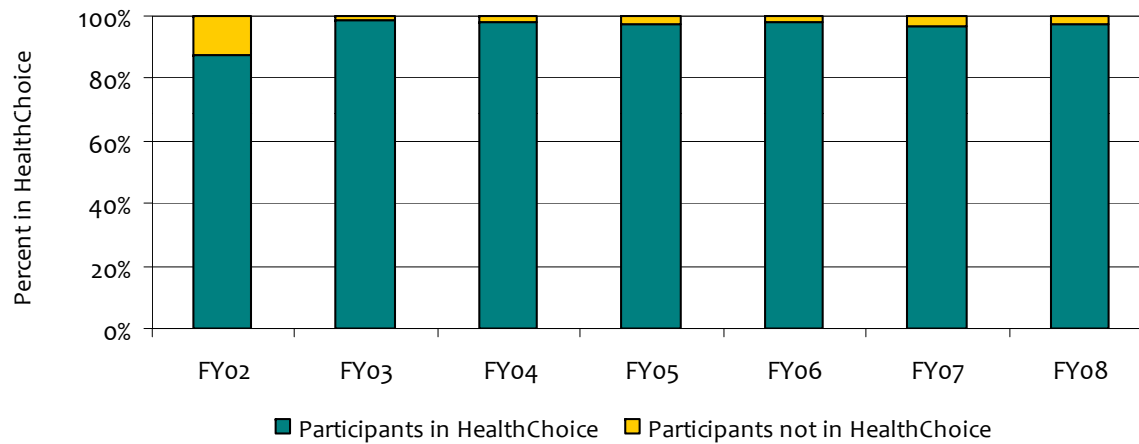


Source: DSS

Pharmacy expenditures for waiver participants increased steadily from FY 2002 to FY 2008, when they reached \$1.67 million.

HealthChoice Utilization and Capitation Payments

Figure 40. Percentage of Autism Waiver Participants Enrolled in a HealthChoice MCO

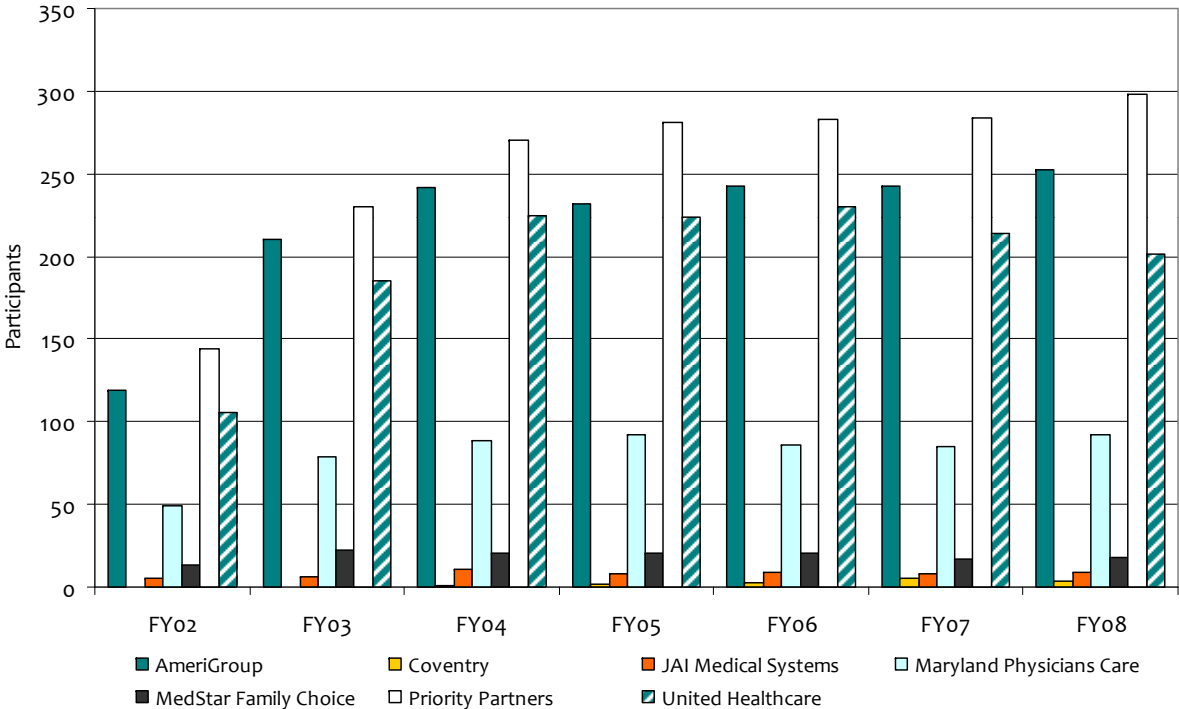


Note: HealthChoice MCOs are health care organizations that provide services on a capitated basis to Maryland Medicaid participants enrolled in the HealthChoice managed care program.

Source: DSS

Historically, the majority of Autism Waiver participants have been enrolled in a HealthChoice MCO. In FY 2008, over 97% of waiver participants were enrolled in a HealthChoice MCO.

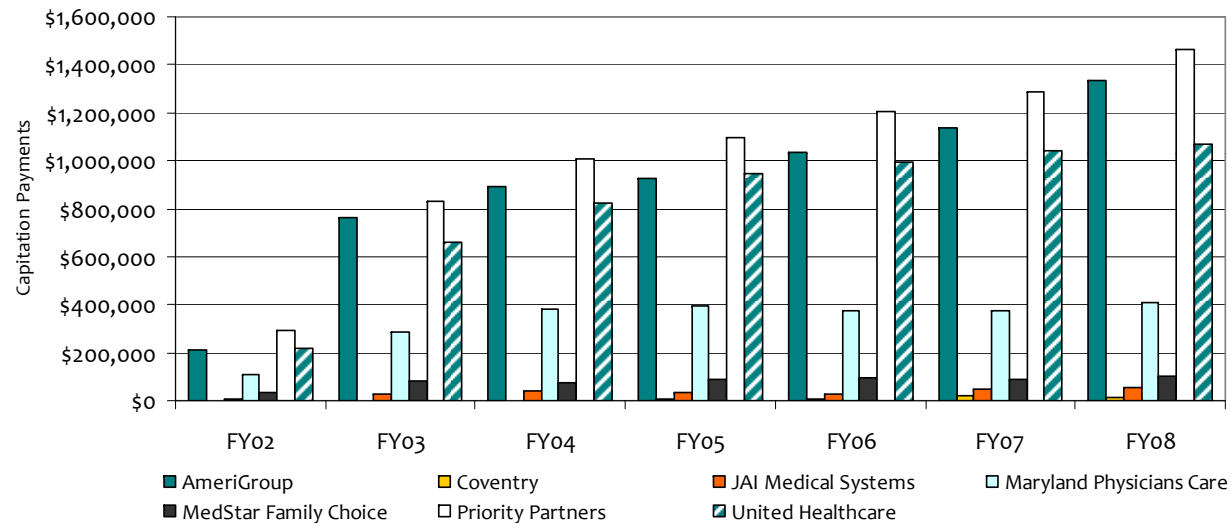
Figure 41. Number of Autism Waiver Participants Enrolled in HealthChoice, by MCO Enrollment



Source: DSS

While the number of Autism Waiver participants enrolled in each of the HealthChoice MCOs varies annually, enrollment in Amerigroup, Priority Partners, and United Healthcare was consistently higher than in the other MCOs.

Figure 42. Capitation Payments to HealthChoice MCOs for Autism Waiver Participants

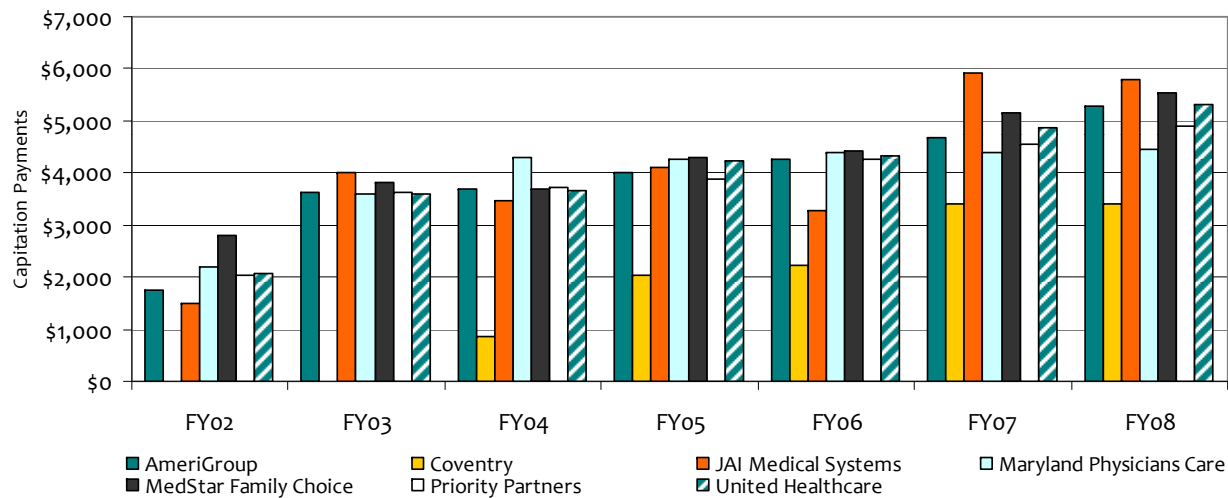


Capitation payments to Priority Partners, Amerigroup, and United Healthcare accounted for 33%, 30%, and 24%, respectively, of the \$4.4 million in total capitation payments for Autism Waiver participants in FY 2008.

Note: Annual capitation payments for Autism Waiver participants enrolled in HealthChoice MCOs are individually risk-adjusted, thus reflecting relative acuity/risk of the individuals enrolled in that health plan.

Source: DSS

Figure 43. Average Annual MCO Capitation Payments for Autism Waiver Participants, by HealthChoice MCO



Source: DSS

Prior to FY 2007, the average annual MCO capitation payments for Autism Waiver participants were less than \$4,500 for each of the seven MCOs.

In FY 2008, the average annual capitation payment exceeded \$5,000 for four of the seven MCOs.



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