

**Prevalence Estimates of Autism and Autism Spectrum
Disorder in Massachusetts**

**Final Report
December 2005**

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Executive Summary

The Acts of 2001 directed the Massachusetts Department of Public Health (MDPH) to determine the prevalence of autism in Massachusetts. However, no uniform data collection system currently exists to readily determine the number of children with a diagnosis of autism or an autism spectrum disorder (ASD). Historically, researchers have reported in the scientific literature autism prevalence estimates ranging from 2 to 10 cases per 10,000 children. Prevalence studies over the last five years or so, however, have reported higher estimates, e.g., 30 to 40 cases per 10,000 for autism and higher for ASD.

In consultation with an advisory committee, MDPH determined that Massachusetts Department of Education (MDOE) data on educational disabilities offered the best available source of information on autism and ASD in the Commonwealth. Therefore, the prevalence estimates developed for this report are based on educationally categorized reports of autism as recorded for a student in the student's Individual Education Program (IEP) plan by a school's special education department and submitted to the MDOE through its Student Information Management System (SIMS).

In Massachusetts, special education enrollment data (including disability counts) were not collected on an individual level until October 2001. Thus, this report evaluated three years of disability and school enrollment data: schools years 2002-2003, 2003-2004, and 2004-2005. In addition, this report evaluated data collected by the MDOE under its "Exploring the Options for Children with Autism" (ETO) grants. Data were evaluated from 43 school districts that received ETO grants and for which at least two years of data were available.

School district prevalence was estimated as the number of children with autism (ages 3-22) or ASD per 10,000 children. (It was not possible to estimate city/town prevalence because the MDOE data are for school districts, which can include multiple communities.) The range of prevalence estimates for autism in Massachusetts, based on

three years of data, is 26 to 55 per 10,000 children, depending upon the year and method of estimation. For ASD, the range of prevalence estimates is 71 to 81 per 10,000 children. In addition, based on the IEP data, it appears that autism prevalence is generally higher among the younger age groups than the older age groups, and there is an increasing trend in autism diagnosis over the birth years of 1987-1999.

The data presented in this report have several important limitations, including the lack of verification of reported cases; reliance on educational records alone that may be biased as a result of service eligibility and/or varying data quality across years and school districts; and lack of data on students who may have autism but are classified in some other way on the IEP (e.g., developmental delay). It seems likely that the number of children with autism is underestimated based on the IEP data alone. While most researchers believe that more complete diagnoses and a broader definition of ASD explain the differences in current and historical rates of autism, others believe that at least some of the increase may be due to some as yet unidentified environmental factor.

In conclusion, the prevalence estimates based on MDOE data suggest that the number of children with autism and ASD in Massachusetts are higher than indicated in recent scientific literature and that the prevalence estimates are higher for the last year evaluated (2004-2005 school year) than for earlier years. Based on this analysis of existing data on the number of children with autism and autism spectrum disorders in Massachusetts, the MDPH recommends that consideration be given to the development of a uniform, statewide reporting system for autism and autism spectrum disorders.

Introduction/Background

The Acts of 2001 (Fiscal Year 2002 Government Appropriations Act) contained a line item directive to the Massachusetts Department of Public Health (MDPH) to determine the prevalence of autism in Massachusetts. Specifically, the directive stated that the Commissioner of Public Health “make an investigation and study relative to the incidence of autism spectrum disorder among children age 0 to 18, inclusive, stratified by birth age within the cities and towns and how the rate compares to analogous states.”

Given that no uniform data collection system currently exists to readily determine the number of children with a diagnosis of autism (or a diagnosis within the spectrum of autism disorders), MDPH staff met with legislative sponsors of the line item directive to discuss an initial approach for responding to the directive. The limitations of data collected by the Massachusetts Department of Education (MDOE) were part of the discussion. Possible approaches to filling in existing data gaps were proposed.

Following those meetings an advisory committee was established to assist the MDPH in moving forward with the directive. On November 22, 2002, the first meeting of the Autism Advisory Committee was held. The agenda included a discussion of the “charge” to the committee and decision points concerning the best approach to addressing the question of a determination of the prevalence of autism in Massachusetts. One question that the Autism Advisory Committee asked MDPH to explore related to whether the prevalence of autism spectrum disorders (ASDs) is under-recognized and under-reported in the very young. For that reason, including children less than 3 years of age in this investigation might lead to case ascertainment bias. It was agreed that MDOE data (for children over 3 years of age) may more accurately capture the prevalence of the full spectrum, including the milder forms that are often not recognized in very young children. Appendix A contains information on the MDPH’s Early Intervention System for children with ASD.

This report provides existing prevalence data on autism and autism spectrum disorders in Massachusetts. The data are also presented in terms of their important limitations and within the context of prevalence data reported for other geographic areas.

Methods/Data Sources

To better understand the prevalence of autism and ASD in Massachusetts, two data sources were identified:

- Special education enrollment data by educational disability, as recorded on a student's Individualized Education Program (IEP) and reported to the MDOE; these data will be referred to in this report as the *IEP data*.
- MDOE grant data that consist of counts of children with Autism Spectrum Disorder (ASD) by grade level for communities in the Commonwealth that have received "Exploring the Options for Children with Autism" (ETO) grants through MDOE's Early Learning Services program; these data will be referred to in this report as the *grant data*.

In addition to the *IEP* and *grant data*, survey data was collected by the MDPH during the summer of 2004. Working collaboratively with the Autism Support Center, the Asperger's Association of New England, and the MDPH Autism Advisory Committee, a survey was sent to the parents/caregivers of autistic children living in twelve school districts that received the MDOE's "Exploring the Options for Children with Autism" (ETO) grants. The main purpose of the survey was to identify the primary disability of the child as indicated on their Individualized Education Program and compare it to the ASD-related medical diagnosis of the child as reported by the parent/caregiver on the survey form. Comparing the IEP-reported educational disability to the reported medical diagnosis allowed for some evaluation of the accuracy of estimating ASD prevalence using the IEP autism dataset. Appendix B contains a copy of the survey form.

Mailing lists of the Autism Support Center and the Asperger's Association of New England were used to identify the parents/caregivers of autistic children in the twelve school districts; the districts included the following: Boxford, Everett, Lowell, Marblehead, Medford, Methuen, Middleton, Reading, Saugus, Stoneham, Topsfield, and Tyngsboro. To maintain confidentiality, these organizations mailed the surveys directly to their memberships. A total of 536 surveys were sent to the parents/caregivers of autistic children in the 12 school districts; the Asperger's Association of New England and the Autism Support Center had 274 and 262 parents, respectively, on their mailing lists in these districts. One hundred and ninety two (36%) surveys were returned to the MDPH.

Because of the low response rate, the results will not be presented here. A response rate of 36% raises doubts about the validity of any conclusions that could be drawn from these data.

IEP Data

An Individualized Education Plan (IEP) specifies a specific set of services that parents and the school jointly determine will be provided to meet a child's special education needs. The IEP is determined following evaluation of a child's educational strengths and needs. A student can be referred for an evaluation by a parent or others, including school personnel. An evaluation must be conducted by appropriately credentialed and trained specialist(s) to determine whether a child has a disability and, if so, what type. An educational disability can fall into one of 13 categories, with one category being autism. The MDOE maintains a computerized student-level data collection system called the Student Information Management System (SIMS). SIMS contains demographic and other information on a student, including IEP information. Any child receiving public funds for special education, whether attending a public or private school, is included in SIMS. Therefore, the MDOE's IEP data is a useful source for estimating the number of children considered to have the disability of autism; however, ASD is not considered a separate disability category.

Educationally-categorized autism is defined under the 1997 amendments to the federal Individuals with Disabilities Education Act (IDEA) as “...a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age 3, which adversely affects a child’s educational performance...” The 13 categories are listed in Table 1 and represent both the state and federal disability categories. Some of the categories differ by name only; that is, the state and federal categories are the same by definition even though their names may differ.

Table 1
Thirteen categories of educational disabilities on an IEP

State Disability Categories	Federal Disability Categories
Autism	Autism
Intellectual	Mental Retardation
Sensory/Hearing	Hearing Impairment
Communication	Speech
Sensory/Vision	Vision Impairment
Emotional	Emotional Impairment
Physical	Orthopedic Impairment
Health	Other Health
Specific Learning Disability	Specific Learning Disability
Deaf/Blind	Deaf/Blind
Multiple Disabilities	Multiple Disabilities
Neurological	Traumatic Brain Injury
Developmental Delay	Developmental Delay

The age range of children in the IEP data set is 3 to 22 years of age, including pre-Kindergarten and special education students enrolled in career and technical education post-graduate classes (i.e., students who have finished high school but have returned to complete specific technical school requirements).

Prior to October 1, 2001 data for special education students were not collected by the MDOE at the student level. Estimates of the number of students with particular disabilities were made based on the findings of a one-time survey conducted by the MDOE in 1990. As of October, 2001, enrollment data began to be submitted at the student level through SIMS. Three years of school special education data (including data on disability type(s)) for the school years 2002-2003, 2003-2004, and 2004-2005, are now available from the MDOE (www.doe.mass.edu/infoservices/reports/enroll.)

Grant Data

As part of the ETO grants, communities submitted community-level data to MDOE that included counts of children with ASD by grade level. ASD, as defined in this grant dataset, includes autism, pervasive developmental disorder (PDD), Asperger's syndrome, Rett's syndrome, and childhood disintegrative disorder. SPED directors in participating school districts reported to MDOE the number of children in their district with ASD. Because the grants are given annually, not all of the same school districts received grants over the three years. For this report, we present data for the 43 school districts for which at least two years worth of data are available (see Appendix C). To allow comparison to the IEP dataset, we report grant data for the two school years of 2002-2003 and 2003-2004. While Exploring the Options grants were also issued for the school year 2001-2002, these data were not included due to the lack of adequate comparison data from other data sources (e.g., the IEP dataset). Also, 2003-2004 data represent the most current grant data available to MDPH at the time of this report. Although the grant data report the number of students with ASD by age within school districts, because the number of students in a given grade with ASD is typically small, these data are not reported here to protect confidentiality.

Results

IEP Data

The distribution of educational disabilities across the 13 IEP categories, for the three school years of 2002-2003, 2003-2004, and 2004-2005, are shown in Table 2. The percent that a particular disability represents in the total special education population is also reported. For all three school years, students with autism represent 3% of the total statewide special education (SPED) population. Figure 1 shows this distribution graphically.

Table 2
Distribution of IEP Disabilities over Three School Years

Type of Disability	2002-2003 School Year		2003-2004 School Year		2004-2005 School Year	
Total Children Enrolled in SPED	155,204		154,391		157,108	
Autism	4,080	(3%)	4,876	(3%)	5,476	(3%)
Mental retardation	11,157	(7%)	12,493	(8%)	12,175	(8%)
Hearing impairment	1,030	(0.7%)	1,127	(0.7%)	1,347	(0.9%)
Speech	20,474	(13%)	20,942	(14%)	23,416	(15%)
Vision impairment	451	(0.3%)	473	(0.3%)	604	(0.4%)
Emotional impairment	12,695	(8%)	13,304	(9%)	13,362	(9%)
Orthopedic impairment	1,235	(1%)	1,199	(0.8%)	1,277	(0.8%)
Other health	4,195	(3%)	5,383	(3%)	6,632	(4%)
Specific learning disability	78,480	(51%)	70,862	(46%)	67,672	(43%)
Deaf/Blind	338	(0.2%)	384	(0.2%)	305	(0.2%)
Multiple Disabilities	4,897	(3%)	5,193	(3%)	5,536	(4%)
Traumatic brain injury	3,638	(2%)	4,316	(3%)	4,562	(3%)
Developmental delay	12,534	(8%)	13,839	(9%)	14,753	(9%)

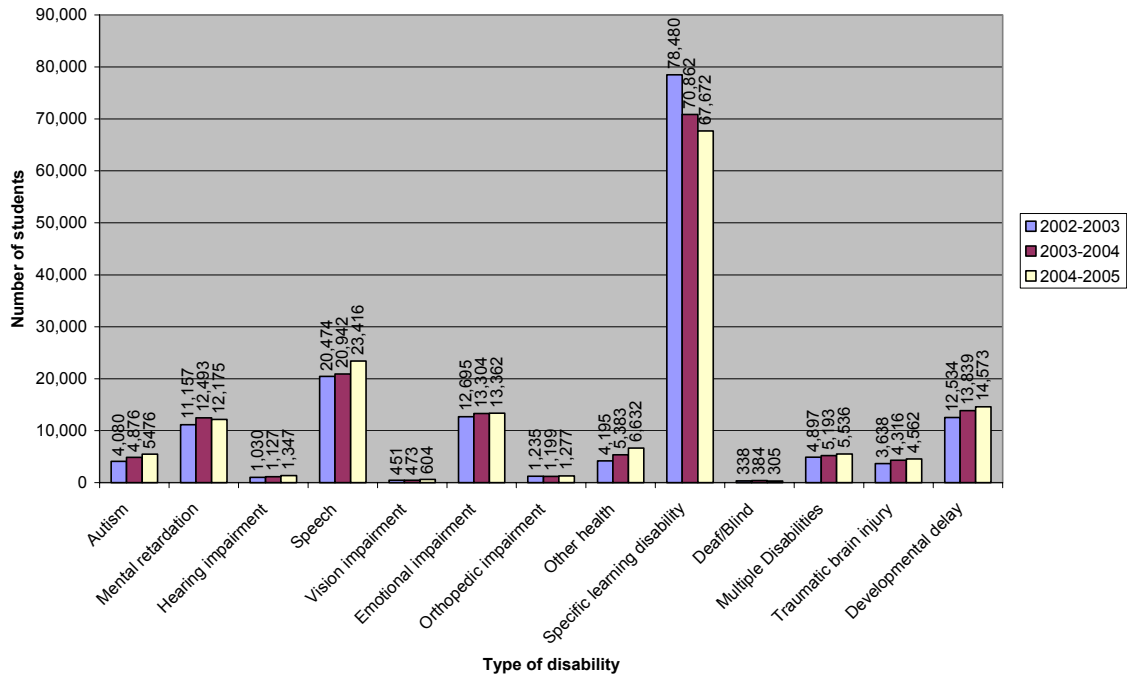


Figure 1
Distribution of IEP Disabilities: 2002-2003, 2003-2004, and 2004-2005

For 2002-2003, 4,080 students were reported with autism in a SPED population of 155,204. For 2003-2004, 4,876 students were reported with autism in a SPED population of 154,391. For 2004-2005, 5,476 students were reported with autism in a SPED population of 157,108. Although the percentage of the SPED population with autism remained constant across the three years at 3%, the number of students with IEP-reported autism rose by 20% (796 students) between 2002-2003 and 2003-2004 and by 12% (600 students) between 2003-2004 and 2004-2005. Table 3 reports the differences in IEP disability counts across these school years.

Table 3

Differences in IEP Disability Counts (and percent change) Over Three School Years

	2002-2003 To 2003-2004	2003-2004 To 2004-2005
Total Children Enrolled in SPED	-813 (-0.5%)	2,717 (2%)
Autism	796 (20%)	600 (12%)
Mental retardation	1,336 (12%)	-318 (-3%)
Hearing impairment	97 (9%)	220 (20%)
Speech	468 (2%)	2,474 (12%)
Vision impairment	22 (5%)	131 (28%)
Emotional impairment	609 (5%)	58 (0.4%)
Orthopedic impairment	-36 (-3%)	78 (7%)
Other health	1,188 (28%)	1,249 (23%)
Specific learning disability	-7,618 (-10%)	-3,190 (-5%)
Deaf/Blind	46 (14%)	-79 (-21%)
Multiple disabilities	296 (6%)	343 (7%)
Traumatic brain injury	678 (19%)	246 (6%)
Developmental delay	1,305 (10%)	914 (7%)

To estimate the prevalence of autism in children (ages 3 to 22) in Massachusetts, we used the following equation:

$$Prevalence = \frac{(\# \text{ with autism IEP})}{School \text{ enrollment (SPED and nonSPED students)}}$$

For this report, autism counts and school enrollment include all students who are enrolled either at a public school, private school, collaborative, or out-of-state educational placement and receive some public funding for the special education services from the student's home school district. Not included in school enrollment are private school

students who do not receive public funds to attend their school and children who are home-schooled. It is important to note that school enrollment as described above is different from the public school enrollment counts provided on the MDOE website; the web public school enrollment counts do not include publicly-funded students at private, collaborative, or out-of-state schools. The disability counts provided on the MDOE web site do, however, include publicly-funded students who attend private, collaborative, or out-of-state schools; this is because these students will have IEPs and the autism/disability counts are based on IEP data. To derive prevalence estimates using comparable MDOE datasets autism counts and school enrollment counts that include all publicly-funded students were used, whether children were attending in-district or out-of-district schools educational programs.

The 95% confidence intervals (95% CI) for each prevalence estimate were also calculated. These confidence intervals represent a statistical range used to indicate the stability of a prevalence estimate. If, however, the number of children with autism or ASD for a given school district was less than five, the prevalence or 95% CIs were not calculated because of the instability of the estimates (an “NC” will appear in the table if prevalence was not calculated). The wider the confidence interval around a prevalence estimate, the less stable the prevalence. For example, a lower and upper confidence interval of 3.8 to 16 is much more stable than a lower and upper confidence interval of 38 to 162, regardless of the number of children noted with autism. The formula used to calculate a 95% CI is provided below (Daniel, W 1999):

$$95\% \text{ CI: prevalence} \pm 1.96\sqrt{\text{prevalence}(1 - \text{prevalence})/N}$$

where N is the school enrollment

In addition to estimating statewide prevalence using school enrollment in the denominator, statewide prevalence using total birth population in the denominator was also calculated. This alternate approach, using total births in the calculation, allows

children not receiving public funds for special education services to be included (e.g., private school and home-schooled children) in the school enrollment count. By using both approaches, a range of prevalence estimates is presented. It is reasonable to expect the “true” prevalence to fall somewhere in the range.

To calculate total births, a birth year was first assigned to the various age categories (3 through 21 years of age), based on the school year, since actual age was not readily available. For example, for the 2002-2003 school year, it was assumed that a five-year old was born in 1997 and that the child entered kindergarten as a five-year old. Using birth year, the number of births in the state for a given year could be obtained from MassCHIP (the Massachusetts Community Health Information Profile), a public web-based database maintained by the MDPH. The births across the various birth years were then summed to obtain the total birth population for a given school year.

Statewide estimates of the prevalence of autism for 2002-2003, 2003-2004, and 2004-2005, when school enrollment is used in the denominator, are shown in Table 4 (data source: IEP data). For 2002-2003, autism prevalence is estimated at 41/10,000 (95% CI: (40, 42)). For 2003-2004, it is estimated at 49/10,000 (95% CI: 48, 51)), and for 2004-2005, autism prevalence is estimated at 55/10,000 (95% CI: (54, 57)). School district-specific prevalence estimates for autism and ASD for the 374 (school year 2003-2003), 378 (school year 2003-2004), and 384 (school year 2004-2005) school districts in the state are contained in Appendices E, F, and G (data source: IEP data). The data in these appendices were used to estimate statewide prevalence.

Table 4
Estimates of Statewide Autism Prevalence Based on IEP Disability and School Enrollment Data

School Year	Number of Students Ages 3 to 22 with IEP-reported Autism	School Enrollment Ages 3 to 22	Total SPED Enrollment	Prevalence Estimate (95% CI)
2002-2003	4,080	991,641	155,204	41/10,000 (40, 42)
2003-2004	4,876	991,478	154,391	49/10,000 (48, 51)
2004-2005	5,467	986,662	157,108	55/10,000 (54, 57)

Table 5 contains statewide prevalence estimates using total birth populations in the denominator. As with the prevalence estimates in Table 4, the numerators are based on IEP-reported counts of autism. For the three school years, the prevalence estimates made using birth populations in the denominator are between 37% and 38% lower than the prevalence estimates made using school enrollment in the denominator. For 2002-2003, autism prevalence is 26 per 10,000 (based on birth populations); this represents a 37% lower prevalence than that estimated based on school enrollment. For 2003-2004, autism prevalence is 31 per 10,000 (based on birth populations) compared to 49 per 10,000 (based on school enrollment), a 37% lower estimate. Similarly, for 2004-2005, autism prevalence is 34 per 10,000 (based on birth populations) compared to 55 per 10,000 (based on school enrollment), a 38% lower estimate.

Table 5
Estimates of Statewide Autism Prevalence Based on IEP Disability Data and Total Birth Population

School Year	Number of Students Ages 3 to 22 with IEP-reported Autism	Total Birth Population	Prevalence Estimate (95% CI)
2002-2003	4,080	1,572,094	26/10,000 (25, 27)
2003-2004	4,876	1,579,758	31/10,000 (30, 32)
2004-2005	5,467	1,585,023	34/10,000 (33, 35)

The age distribution of students with autism is shown in Figures 2-6 for the school years 2002-2003, 2003-2004, and 2004-2005, respectively. The figures show that the number of cases of autism is highest between approximately ages 3 and 12. Autism prevalence was examined as a function of time in two ways. First, statewide prevalence by age was plotted for the three school years 2002-2003 (Figure 2), 2003-2004 (Figure 3), and 2004-2005 (Figure 4) using total birth population in the denominator. Ages 5 through 17 were included but ages 3 and 4 were excluded as new cases are still being ascertained during these years and hence these ages could produce unstable estimates. Figure 5 shows that autism prevalence appears to be somewhat greater during the 2004-2005 school year than the two previous school years at most age groups. It also shows that autism prevalence is higher among the younger age cohorts than the older age cohorts.

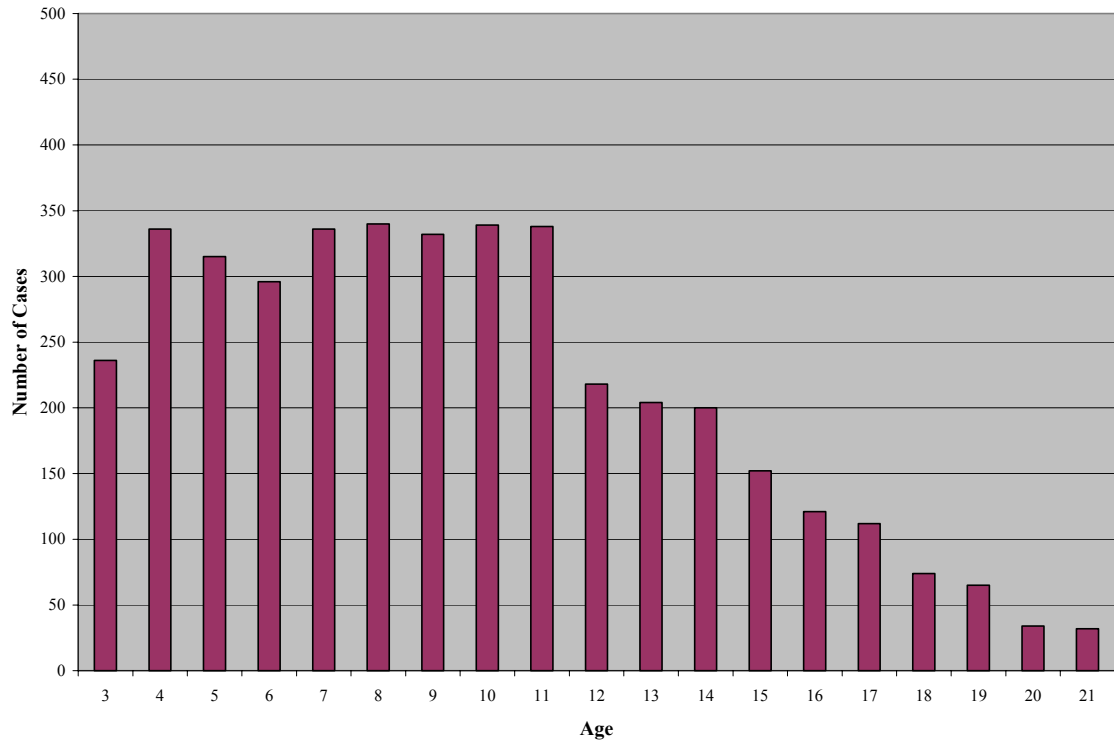


Figure 2
Age Distribution of Students with Autism for 2002-2003

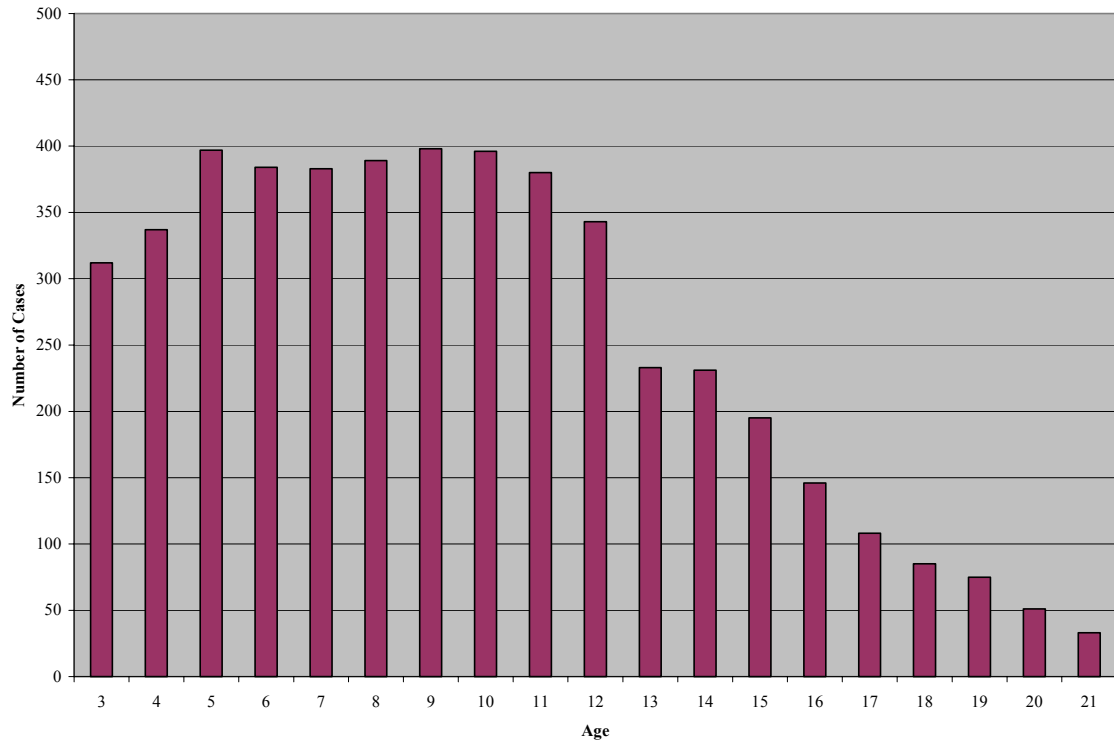


Figure 3
Age Distribution of Students with Autism 2003-2004

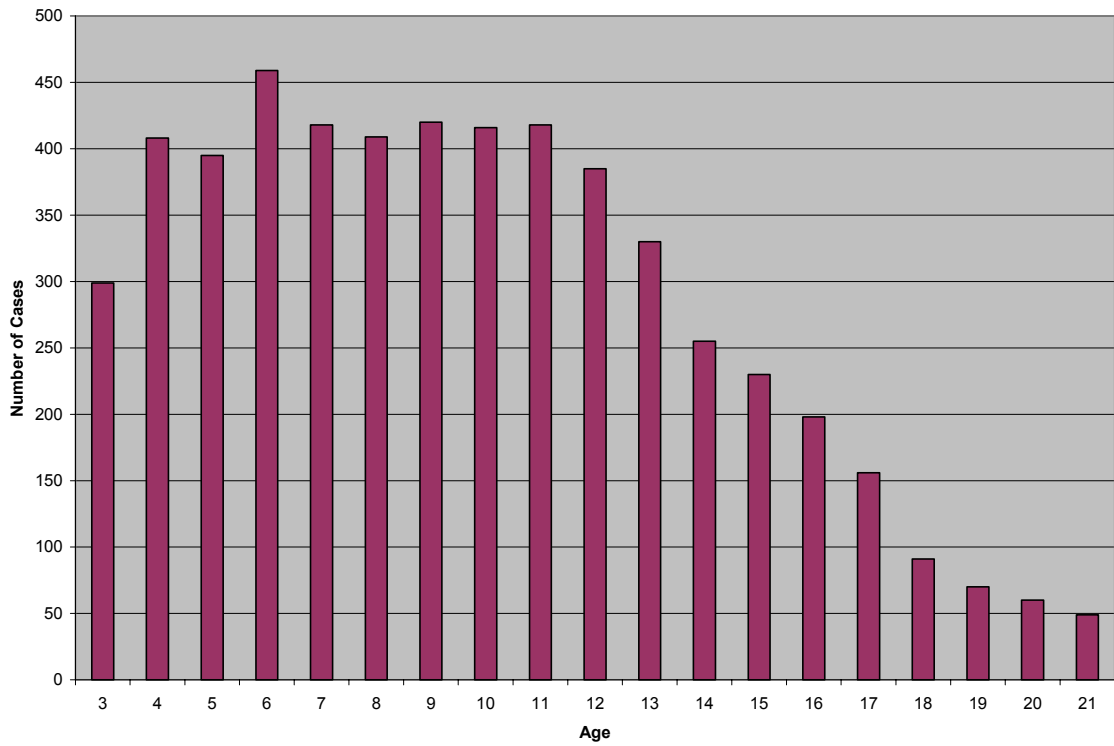


Figure 4
Age Distribution of Students with Autism 2004-2005

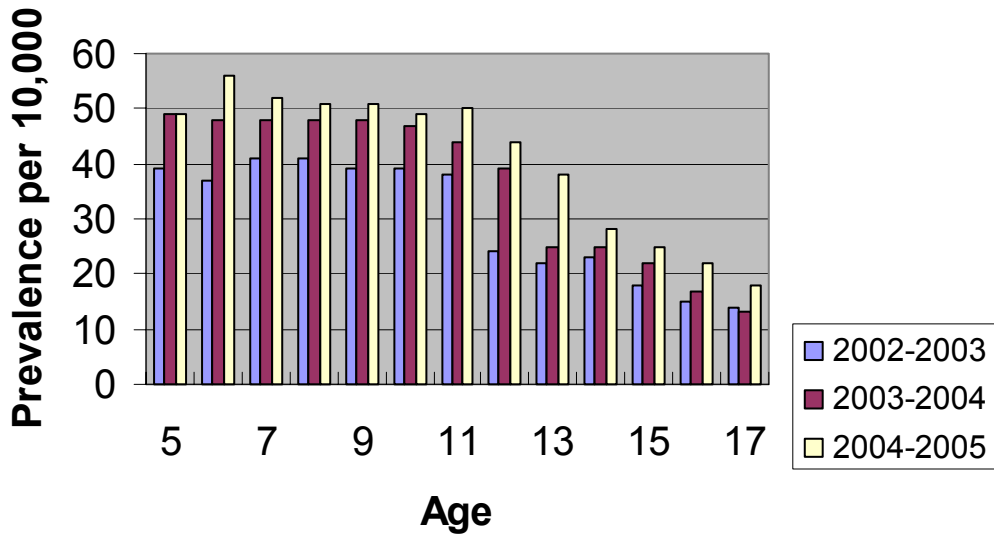


Figure 5

Statewide Autism Prevalence by Age (using births in denominator) over Three Years

Second, autism prevalence was plotted by birth year, based on the latest year of disability data (2004-2005) and births in the denominator (Figure 6). The oldest group of students on this graph, the 17 year olds, would have been born in 1987. The youngest group of students, the five year olds, would have been born in 1999. The figure shows that autism prevalence increases with birth year, as illustrated by the trend line.

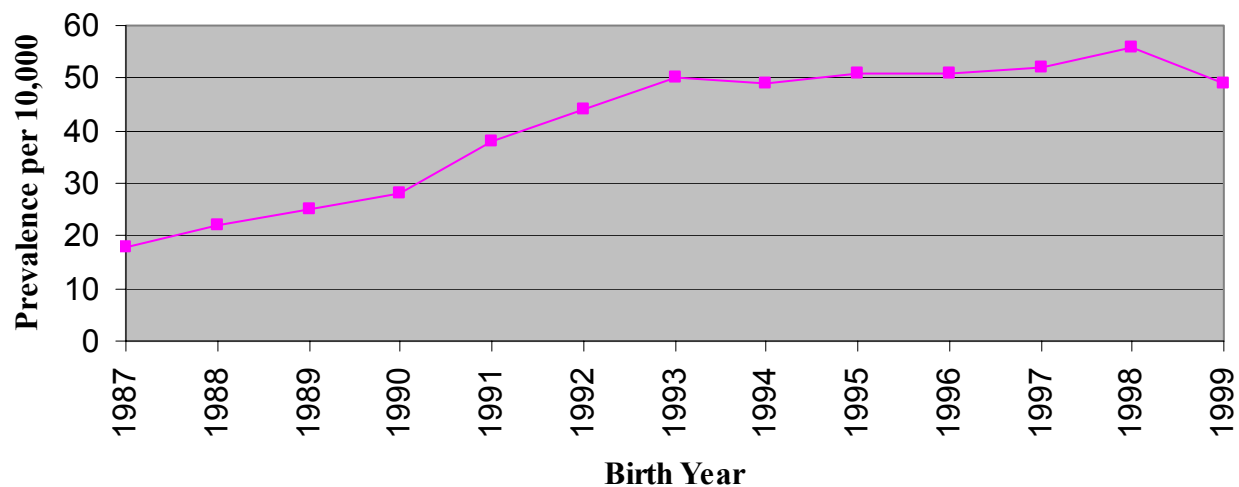


Figure 6
Autism Prevalence by Birth Year for the 2004-2005 Population of Students with IEP-Reported Autism

Grant data

While the *IEP data* report on the number of students placed into the autism IEP category, the *grant data* report on the number of students with autism spectrum disorder. As mentioned earlier, ASD includes autism as well as pervasive developmental disorder, Asperger’s syndrome, Rett’s syndrome, and childhood disintegrative disorder. Prevalence estimates for ASD for 2002-2003 and 2003-2004 are provided in table 6. These estimates are made using grant data for the 43 school districts who received MDOE Exploring the Options grants for the two consecutive years of 2002-2003 and 2003-2004. Appendix D contains the district-specific ASD and school enrollment numbers.

Table 6
Estimates of Autism Spectrum Disorder Prevalence Using Grant Data for 43 Districts

School Year	Number of Students Ages 3 to 22 Reported with Autism Spectrum Disorder	School Enrollment Ages 3 to 22	Prevalence Estimate (95% CI)
2002-2003	1,374	192,235	71/10,000 (68, 75)
2003-2004	1,551	191,401	81/10,000 (77, 85)

Table 6 shows that for 2002-2003, 1,374 students were reported to have ASD out of a total enrollment of 192,235 students (publicly-funded SPED and non-SPED students) in the 43 districts (data source: grant data). This represents a prevalence of 71/10,000 (95% CI: (68, 75)). For 2003-2004, 1,551 students were reported to have ASD out of a total enrollment of 191,401 students or a prevalence of 81/10,000 (95% CI: (77, 85)) (data source: grant data).

Using the district-specific *IEP data*, the prevalence of autism in the 43 ETO-participating districts was estimated as well (data source: IEP data). The number of students with autism in the 43 districts was extracted from the MDOE website file entitled “Special Education Enrollment by Disability” and combined with the district-specific school enrollment data. Prevalence estimates for autism for the 43 districts for 2002-2003 and 2003-2004 are provided in table 7. Appendix D contains the district-specific autism and school enrollment numbers.

Table 7
Estimates of Autism Prevalence Using IEP Data for 43 Districts

School Year	Number of Students Ages 3 to 22 with IEP-reported Autism	School Enrollment Ages 3 to 22	Prevalence Estimate (95% CI)
2002-2003	631	192,235	33/10,000 (30, 35)
2003-2004	861	191,401	45/10,000 (42, 48)

Table 7 shows that for 2002-2003, 631 students were reported to have autism out of a total enrollment of 192,235 students in the 43 districts (data source: IEP data). This represents a prevalence of 33/10,000 (95% CI: (30, 35)). For 2003-2004, 861 students were reported to have autism out of a total enrollment of 191,401 or a prevalence of 45/10,000 (95% CI: (42, 48)) (data source: IEP data).

Prevalence estimates for autism and ASD in Massachusetts are summarized in Table 8.

Table 8
Summary of Prevalence Estimates

	Prevalence Estimate			Data source
	2002-2003	2003-2004	2004-2005	
Statewide Autism Prevalence Based on School Enrollment	41/10,000	49/10,000	55/10,000	<i>IEP data and Enrollment</i>
Statewide Autism Prevalence Based on Total Birth Populations	26/10,000	31/10,000	34/10,000	<i>IEP Data and Total Births</i>
43-District Autism Prevalence	33/10,000	45/10,000	<i>NA</i>	<i>IEP data</i>
43-District ASD Prevalence	71/10,000	81/10,000	<i>NA</i>	<i>Grant data</i>

Discussion

There are numerous comprehensive review articles in the medical and epidemiological literature on prevalence estimates and trends in the rates of autism and ASD in the US as well as Europe. Historically, researchers have reported autism prevalence estimates ranging from 2 to 10 cases per 10,000 children. Based on a review of 19 surveys conducted from 1987 through 2001, Fombonne (2002) reported what was described as a “best conservative” estimate of autism prevalence of 10/10,000 and a conservative estimate for all PDDs (autism, Asperger’s syndrome, and PDD-NOS) of 27.5/10,000. Wing and Potter (2002), in their review article on the prevalence of ASDs,

reported that for decades prior to the late 1990s autism was generally considered to be a rare condition with a prevalence of 2 to 4/10,000. Some of the most recent prevalence studies of autism and ASD in the United States are summarized in Table 9.

Table 9
Some Prevalence Estimates Reported in the Literature

Authors	Geographic Area	Disability Included	Prevalence (Number of Cases per 10,000 children)
Croen LA et al. (2002)	California	Autism (Does not include Asperger's, CDD, PDD-NOS, or Rett's)	11
Bertrand J et al. (2001)	Brick Township, NJ	ASD (Includes autism, Asperger's and PDD-NOS)	67
		Autism	40
		Asperger's and PDD-NOS	27
Yeargin-Allsopp M et al. (2003)	Atlanta, Georgia	Autism, Asperger's and PDD-NOS	34
Gurney JG et al. (2003)	Minnesota	ASD (Includes autism, Asperger's, CDD, PDD-NOS, and Rett's)	3 (1991-1992); 52 (2001-2002)
California Department of Developmental Services (2003)	California	Autism	31 (5 years old in 2002, birth year 1997)

In 2001, Bertrand J et al. conducted a study to estimate the prevalence of autism spectrum disorder among children aged 3 through 10 years who were residents of Brick Township, New Jersey (population: approximately 76,000) in 1998 (Bertrand J et al., 2001). The researchers defined ASD to include autism, Asperger's syndrome, and PDD-NOS. Four sources were used to identify cases: special education records, records from local clinicians providing diagnosis or treatment for developmental or behavioral

disabilities, lists of children from parent groups, and families who volunteered to participate in response to media notices. The diagnosis was verified for 71% of the children through a comprehensive clinical assessment. As seen in Table 9, the prevalence of ASD in the New Jersey study was 67 cases per 10,000 children. For autism alone, the prevalence was 40 cases per 10,000 children and for PDD-NOS and Asperger's syndrome combined, the prevalence was 27 cases per 10,000 children.

In 2002, Croen LA et al. conducted a study to examine trends in autism prevalence over several successive annual birth cohorts (Croen LA et al., 2002). Autism was defined according to the California Department of Developmental Services (DDS) definition and did not include Asperger's syndrome, CDD, Rett's syndrome, or PDD-NOS. Using computerized files maintained by the DDS, a statewide service delivery system that coordinates the diagnosis and provision of services for individuals with developmental disabilities, a total of 5,038 children with autism were identified from 4,590,333 California births, representing a prevalence of 11 cases per 10,000. Prevalence ranged from 5.8 per 10,000 for children born in 1987 to 14.9 per 10,000 for children born in 1994. The reliability of the diagnosis extracted from the DDS database was evaluated by reviewing medical records for two randomly selected groups of children; an 85% accuracy rate was found through this verification process.

Two other prevalence studies were published in 2003. The first was a study of autism among children aged 3 to 10 years in the five counties of metropolitan Atlanta in 1996 (Yeargin-Allsopp M et al., 2003). This study was part of the Centers for Disease Control and Prevention's (CDC) Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP). Autism was defined to include autistic disorder, Asperger's syndrome, and PDD-NOS. Cases were identified through screening and abstracting records at multiple medical and educational sources, with case eligibility determined by expert review. A total of 987 of the 289,456 children aged 3 to 10 years in metropolitan Atlanta in 1996 were determined to have autism, a prevalence estimate of 34 per 10,000 children.

The second study published in 2003 was an analysis of ASD prevalence trends in Minnesota (Gurney JG et al., 2003). In this study, ASD included autism, Asperger's syndrome, CDD, Rett's syndrome, and PDD-NOS. The source of data for this study was special education disability data of the Minnesota Department of Children, Families & Learning for the school years 1981-1982 through 2001-2002. The researchers conducted an age-period-birth cohort analysis to evaluate prevalence trends over time. Among children aged 6 to 11 years, ASD prevalence rose from 3 per 10,000 in 1991-1992 to 52 per 10,000 in 2001-2002.

In April 2003, the California Department of Developmental Services issued a report entitled *Autistic Spectrum Disorders, Changes in the California Caseload, An Update: 1999 Through 2002*. Based on the numbers of persons with autism who voluntarily receive services through the Department, the population of people with autism nearly doubled between December 1998 and December 2002. The report concluded that the data support a sustained increase in the population of persons with autism, an increase seen beginning in the 1980s in California. When autism prevalence was examined by birth year using the December 2002 autism population, the estimated prevalence reached a high of 31.2 per 10,000 for birth year 1997 (that is, for children who were born in 1997 and were five years of age as of December 2002).

While autism prevalence was not analyzed by gender in this investigation, studies have consistently identified more boys with autism than girls (National Research Council, 2001). In the *Neurobiology of Autism* (2004), the mean male to female ratio of autism was reported (based on a review of the literature) to be 4.4 to 1, with a range of 1.3 to 1 to 16 to 1. California reported a substantial gender difference in its database with 8 out of 10 autistic individuals being male (2003).

A review of the medical and epidemiological literature illustrates that the epidemiology of autism has received increasing attention. While most researchers believe that more complete diagnoses and a broader definition of ASD explain the differences in current and historical rates of autism (Fombonne 1999 as reported in

National Research Council, 2001), others believe that at least some of the increase may be due to some as yet unidentified environmental factor (Rutter M, 2005).

There are significant methodological differences amongst the various prevalence estimates discussed in this report, making it difficult to compare across studies and reports. Service provider data (that is, educationally-categorized autism) was relied on in this investigation. The California report relied on a different type of service provider data, the records of the statewide agency that provides support and referral services to individuals with autism. Many of the surveys reported in the literature drew upon multiple data sources including medical records, educational records, community service organizations, and advocacy groups. Despite these differences, the prevalence estimates presented in this report appear to be consistent with current estimates in the literature.

Limitations

The data for Massachusetts reported here have several limitations. These include lack of case verification, reliance on educational records alone that may be biased as a result of service eligibility, and low survey response. For the *IEP data*, disability counts as reported on the MDOE website were used; it was not possible to verify the disability category by confirmation with the IEP or by reviewing psychiatric, medical, or clinical records to confirm diagnoses or to identify additional cases, due to restrictions on access to confidential data. The IEP data also provide no clear information on those with Asperger's syndrome or PDD-NOS which represent a large segment of the Massachusetts special needs population. One of the purposes of collecting the survey data was to get some idea of within which IEP disability category are children with ASD often placed. However, because of the low response rate for the survey, we were not able to answer this question. Furthermore, it is possible that children with a diagnosis of autism may not be placed into the IEP autism disability category. Therefore, the number of children with autism, as well as with ASD, may be underestimated using IEP data. As discussed earlier, the MDOE began collecting disability data on individual students in December 2001. Formal evaluations of a student's disability by SPED staff occurred statewide over

a three year period between 2001 and 2003. Therefore, the reliability of the MDOE data has improved since these evaluations were completed, with the 2003-2004 and 2004-2005 datasets representing the most accurate data on the distribution of disabilities across the state; however, the limitation regarding the potential underestimates of children with autism remains.

In addition, the denominators used to estimate prevalence using IEP data (i.e., school enrollment and births) have their limitations. School enrollment data does not include private school students who are not publicly funded nor does it include home-schooled students. Therefore, using school enrollment in the denominator to estimate prevalence may over-estimate the true prevalence. Using the number of births statewide in the denominator to estimate prevalence, may underestimate the true prevalence because the numerator does not include all students (i.e., those in private schools or home-schooled that are not receiving public funds). Therefore, the prevalence of diagnosed autism using IEP data is likely somewhere between the estimate using school enrollment and the estimate using births as the denominator.

Prevalence estimates made using the *grant data* may not be representative of the state as a whole because participating districts are not a random sample of all school districts in the state. But these data are based on the number of children with a diagnosis of ASD. Therefore, they overcome a limitation of the IEP data in which all children are assigned an IEP disability category that may not necessarily directly reflect their diagnosis. Since there is no IEP disability category for ASD, these data demonstrate that the prevalence of ASD is about double that of autism (estimated using IEP data).

Caution should be used when comparing the prevalence in one school district with that of another. The district-specific prevalence estimates contained in Appendices D through H may be quite unstable depending on the number of students with autism or ASD and the district enrollment. The instability is demonstrated by the wide confidence intervals around the prevalence estimates. This statistical instability is one possible explanation for the differences observed between school districts. Another possible

explanation is the differences in the ascertainment of autism or ASD (i.e., the evaluation of the child) in different school districts. All districts are not always able to provide the same level of services. The differences in available services may be reflected in the variable prevalence figures observed by school district.

Summary/Conclusions

Based upon the datasets reviewed in this investigation, the range of prevalence estimates for autism is 26 to 55 per 10,000. For ASD, which includes autism as well as Asperger's syndrome, CDD, Rett's syndrome and PDD-NOS, the range of prevalence estimates is 71 to 81 per 10,000. Given the limitations of the data (as discussed above), these prevalence estimates should be viewed as crude estimates of the true prevalence of autism and ASD in Massachusetts. When viewed in light of prevalence estimates reported in the recent medical and epidemiological literature, these crude estimates do support what appears to be a greater number of children receiving services for autism and ASD in Massachusetts than indicated by past estimates of prevalence.

Recommendations

Based upon this analysis of existing data on the number of children with autism and autism spectrum disorders in Massachusetts, the MDPH recommends that future evaluations of prevalence be conducted once a uniform, statewide reporting system for autism and autism spectrum disorders is established.

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Appendix A

Early Intervention System

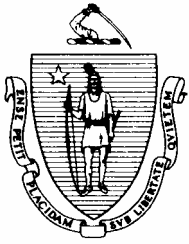
The Department of Public Health has provided specialized services for children in the Early Intervention system who are on the autism spectrum since March of 1998. Growth in the system is illustrated in this chart.

Growth in ASD Specialty Services in the Early Intervention System

Year	Number of Specialty Programs	Number of Children Enrolled ¹
3/98-6/98	4	133
FY'99	4	340
FY'00	6	438
FY'01	11	628
FY'02	10	683
FY'03	9	720
FY'04	10	775

¹Represents a cumulative count across fiscal years and not actual counts per fiscal year.

Appendix B



The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
250 Washington Street, Boston, MA 02108-4619

Survey for Parents of Children with Autism Spectrum Disorder

Instructions: Please complete this survey for your child with Autism Spectrum Disorder (ASD). If you have more than one child with ASD you may contact us (Swati Rawani @ 617-624-5757) for another copy or make additional copies of this survey. You will need your child's Individualized Education Program (IEP) form to answer some questions. If you do not have this form or if the IEP coversheet is missing, we suggest that you complete the survey based on your knowledge of special education services your child is receiving at school. All your individual responses will be kept confidential.

1) What is your child's date of birth?

_____ (mm/dd/yyyy)

2) What is your child's gender? (Please circle the appropriate answer)

Male Female

3) What is your child's town of residence?

4) What is the name of the school your child attended during the 2003-04 school year?

5) For the school year 2003-04, did the school consider your child eligible for special education services? (Please circle the appropriate answer and follow the directions following your selected answer choice)

- a) Yes, my child was eligible for special education services through an IEP plan (Proceed to question 6)
- b) Yes, my child was eligible for special education services through a 504 plan (Skip to question 8)
- c) No, my child attended private school and did not receive any public school assistance(Skip to question 10)
- d) No, my child was home-schooled and did not receive any public school assistance (Skip to question 10)
- e) Other, Please explain _____ (Proceed to question 6)
- f) Don't Know _____ (Proceed to question 6)

6) You should answer this question based on your child's Individualized Education Program (IEP) form. The IEP form given to you by the school should have your child's primary disability marked. Based on this IEP form what is your child's Primary Disability? (Please circle all that apply)

- a) Intellectual
- b) Sensory/ Hearing Impaired or Deaf
- c) Communication
- d) Sensory/ Vision Impaired or Blind
- e) Emotional
- f) Physical
- g) Health
- h) Specific Learning Disabilities
- i) Sensory/ Deaf blind
- j) Multiple Disabilities
- k) Autism
- l) Neurological
- m) Developmental Delay
- n) Unknown
- o) No IEP evaluation

7) When (date or year) was the above disability determined by the school?

_____ (mm/dd/yyyy)

8) For the school year 2003-04 was your child provided Special Education services by the school?
(Please circle appropriate answer. If you reply no, skip to question 10)

Yes No

9) For the year 2003-04 what was yours child’s Special Educational Placement in school?

- a) Full Inclusion
- b) Partial Inclusion
- c) Substantially Separate Classroom
- d) Public Separate Day School
- e) Private Separate Day School
- f) Residential School
- g) Homebound/ Hospital (not home schooled)
- h) Public Residential Facilities
- i) Other (please specify)_____
- j) Don’t Know

10) Based on a medical evaluation by a health professional (physician or psychologist), what is your child’s current medical diagnosis as it relates to his/her developmental disability? *(Please circle all that apply)*

Current Medical Diagnosis as it relates to child’s developmental disability	Age at Initial Diagnosis (of this diagnosis)
A) Autism Spectrum Disorder (ASD)	
a) Autism	
b) Asperger Syndrome	
c) Pervasive Developmental Disorder – Not Otherwise Specified (PDD/NOS)	
B) Rett Syndrome	
C) Childhood Disintegrative Disorder	
D) Diagnosis not determined	
E) Diagnosis Unknown	

11) Who provided a formal medical diagnosis for your child with the above disability?

(Please circle choice a OR b)

- a) Diagnosis was provided by school during IEP evaluation
- b) Diagnosis was provided by private health professional outside of school.

If you select choice b, circle the type of health professional that provided this diagnosis (please circle all that apply):Pediatrician

- 1. Neurologist
- 2. Psychologist
- 3. Neuropsychologist
- 4. Psychiatrist
- 5. Other (please specify)_____
- 6. Don't Know

Appendix C

**Autism Spectrum Disorder and Enrollment Counts
For 43 Districts using Grant Data
2002-2003**

District Name	ASD	Enrollment	Prevalence Per 10,000	95%CI
Attleboro	18	6766	27	(14, 39)
Boxford	12	998	120	(53, 188)
Brockton	117	16801	70	(57, 82)
Chelsea	20	5879	34	(19, 49)
East Bridgewater	8	2490	32	(10, 54)
Easton	30	3876	77	(50, 105)
Everett	53	5453	97	(71, 123)
Fitchburg	49	6059	81	(58, 103)
Foxborough	13	2877	45	(21, 70)
Franklin	33	5758	57	(38, 77)
Greenfield	35	2260	155	(104, 206)
Hanover	22	2751	80	(47, 113)
Leominster	46	6237	74	(53, 95)
Longmeadow	38	3356	113	(77, 149)
Lowell	78	15497	50	(39, 61)
Marblehead	32	2977	107	(70, 145)
Medford	39	4772	82	(56, 107)
Medway	16	2878	56	(28, 83)
Methuen	67	7156	94	(71, 116)
Middleton	11	703	156	(65, 248)
Norfolk	17	1162	146	(77, 215)
Northampton	25	2939	85	(52, 118)
North Attleborough	41	4723	87	(60, 113)
Norton	20	3228	62	(35, 89)
Plainville	10	816	123	(47, 198)
Reading	40	4357	92	(63, 120)
Revere	15	5989	25	(12, 38)
Rockland	29	2821	103	(66, 140)
Saugus	21	3403	62	(35, 88)
Sherborn	7	449	156	(41, 270)
Springfield	125	26775	47	(39, 55)
Stoneham	53	3003	176	(129, 224)
Topsfield	11	745	148	(61, 234)
Tyngsborough	25	2242	112	(68, 155)
West Bridgewater	10	1038	96	(37, 156)
Winthrop	23	2157	107	(63, 150)
Adams-Cheshire	21	1879	112	(64, 159)
Athol-Royalston	12	2235	54	(23, 84)
Bridgewater-Raynham	26	6202	42	(26, 58)
Hampden-Wilbraham	18	3944	46	(25, 67)
Martha's Vineyard	57	1925	296	(220, 372)
Masconomet	8	1910	42	(13, 71)
Old Rochester	23	2749	84	(50, 118)
Total	1374	192235	71	(68, 75)

**Autism Spectrum Disorder and Enrollment Counts
For 43 Districts using Grant Data
2003-2004**

District Name	ASD	Enrollment	Prevalence per 10,000	95% CI
Attleboro	48	6582	73	(52, 93)
Boxford	14	1041	134	(65, 204)
Brockton	134	16576	81	(67, 94)
Chelsea	23	5784	40	(24, 56)
East Bridgewater	12	2442	49	(21, 77)
Easton	36	3864	93	(63, 123)
Everett	66	5418	122	(93, 151)
Fitchburg	68	5865	116	(89, 143)
Foxborough	22	2916	75	(44, 107)
Franklin	41	5882	70	(48, 91)
Greenfield	38	2143	177	(121, 233)
Hanover	18	2799	64	(35, 94)
Leominster	48	6307	76	(55, 98)
Longmeadow	28	3437	81	(51, 112)
Lowell	100	15210	66	(53, 79)
Marblehead	40	3039	132	(91, 172)
Medford	39	4763	82	(56, 107)
Medway	14	2913	48	(23, 73)
Methuen	72	7329	98	(76, 121)
Middleton	16	798	201	(103, 298)
Norfolk	19	1195	159	(88, 230)
Northampton	21	3016	70	(40, 99)
North Attleborough	47	4712	100	(71, 128)
Norton	22	3216	68	(40, 97)
Plainville	12	838	143	(63, 224)
Reading	46	4322	106	(76, 137)
Revere	17	5775	29	(15, 43)
Rockland	28	2752	102	(64, 139)
Saugus	22	3346	66	(38, 93)
Sherborn	9	451	200	(70, 329)
Springfield	138	26566	52	(43, 61)
Stoneham	51	3025	169	(123, 214)
Topsfield	11	755	146	(60, 231)
Tyngsborough	29	2288	127	(81, 173)
West Bridgewater	11	1030	107	(44, 170)
Winthrop	28	2167	129	(82, 177)
Adams-Cheshire	25	1859	134	(82, 187)
Athol-Royalston	12	2224	54	(24, 84)
Bridgewater-Raynham	11	6114	18	(7, 29)
Hampden-Wilbraham	24	3914	61	(37, 86)
Marthas Vineyard	52	1918	271	(198, 344)
Masconomet	8	2013	40	(12, 67)
Old Rochester	31	2797	111	(72, 150)
Total	1551	191401	81	(77, 85)

Appendix D

**Autism and Enrollment Counts for
43 Districts using IEP Data
2002-2003**

District Name	Autism	Enrollment	Prevalence per 10,000	95%CI
Attleboro	6	6766	9	(2, 16)
Boxford	6	998	60	(12, 108)
Brockton	50	16801	30	(22, 38)
Chelsea	19	5879	32	(18, 47)
East Bridgewater	2	2490	NC	NC
Easton	8	3876	21	(6, 35)
Everett	22	5453	40	(24, 57)
Fitchburg	27	6059	45	(28, 61)
Foxborough	11	2877	38	(16, 61)
Franklin	32	5758	56	(36, 75)
Greenfield	15	2260	66	(33, 100)
Hanover	16	2751	58	(30, 87)
Leominster	30	6237	48	(31, 65)
Longmeadow	20	3356	60	(34, 86)
Lowell	54	15497	35	(26, 44)
Marblehead	17	2977	57	(30, 84)
Medford	25	4772	52	(32, 73)
Medway	8	2878	28	(9, 47)
Methuen	39	7156	54	(37, 72)
Middleton	9	703	128	(45, 211)
Norfolk	7	1162	60	(16, 105)
Northampton	10	2939	34	(13, 55)
North Attleborough	13	4723	28	(13, 42)
Norton	12	3228	37	(16, 58)
Plainville	10	816	123	(47, 198)
Reading	18	4357	41	(22, 60)
Revere	15	5989	25	(12, 38)
Rockland	20	2821	71	(40, 102)
Saugus	8	3403	24	(7, 40)
Sherborn	7	449	156	(41, 270)
Springfield	3	26775	NC	NC
Stoneham	12	3003	40	(17, 63)
Topsfield	3	745	NC	NC
Tyngsborough	16	2242	71	(37, 106)
West Bridgewater	5	1038	48	(6, 90)
Winthrop	10	2157	46	(18, 75)
Adams-Cheshire	10	1879	53	(20, 86)
Athol-Royalston	7	2235	31	(8, 54)
Bridgewater-Raynham	14	6202	23	(11, 34)
Hampden-Wilbraham	10	3944	25	(10, 41)
Marthas Vineyard	1	1925	NC	NC
Masconomet	0	1910	NC	NC
Old Rochester	4	2749	NC	NC
Total	631	192235	33	(30, 35)

**Autism and Enrollment Counts
For 43 Districts using IEP Data
2003-2004**

District Name	Autism	Enrollment	Prevalence per 10,000	95%CI
Attleboro	25	6582	38	(23, 53)
Boxford	8	1041	77	(24, 130)
Brockton	55	16576	33	(24, 42)
Chelsea	19	5784	33	(18, 48)
East Bridgewater	3	2442	NC	NC
Easton	14	3864	36	(17, 55)
Everett	18	5418	33	(18, 49)
Fitchburg	35	5865	60	(40, 79)
Foxborough	19	2916	65	(36, 94)
Franklin	35	5882	60	(40, 79)
Greenfield	17	2143	79	(42, 117)
Hanover	16	2799	57	(29, 85)
Leominster	40	6307	63	(44, 83)
Longmeadow	27	3437	79	(49, 108)
Lowell	62	15210	41	(31, 51)
Marblehead	16	3039	53	(27, 78)
Medford	36	4763	76	(51, 100)
Medway	8	2913	27	(8, 46)
Methuen	54	7329	74	(54, 93)
Middleton	7	798	88	(23, 152)
Norfolk	4	1195	NC	NC
Northampton	16	3016	53	(27, 79)
North Attleborough	14	4712	30	(14, 45)
Norton	20	3216	62	(35, 89)
Plainville	11	838	131	(54, 208)
Reading	20	4322	46	(26, 67)
Revere	17	5775	29	(15, 43)
Rockland	30	2752	109	(70, 148)
Saugus	15	3346	45	(22, 67)
Sherborn	8	451	177	(56, 299)
Springfield	76	26566	29	(22, 35)
Stoneham	19	3025	63	(35, 91)
Topsfield	3	755	NC	NC
Tyngsborough	15	2288	66	(32, 99)
West Bridgewater	7	1030	68	(18, 118)
Winthrop	6	2167	28	(6, 50)
Adams-Cheshire	9	1859	48	(17, 80)
Athol-Royalston	10	2224	45	(17, 73)
Bridgewater-Raynham	24	6114	39	(24, 55)
Hampden-Wilbraham	9	3914	23	(8, 38)
Marthas Vineyard	3	1918	NC	NC
Masconomet	4	2013	NC	NC
Old Rochester	7	2797	25	(7, 44)
Total	861	191401	45	(42, 48)

Appendix E

**Massachusetts Department of Education
Autism Counts by School District
School Year 2002-2003**

District		Autism Count	Total Enrollment	Prevalence per 10,000	95% CI
0999	State Totals	4,080	991,641	41	(40, 42)
0001	Abington	13	2,372	55	(25, 85)
0002	Acton	11	2,571	43	(18, 68)
0003	Acushnet	10	1,104	91	(35, 146)
0005	Agawam	12	4,447	27	(12, 42)
0007	Amesbury	12	2,768	43	(19, 68)
0008	Amherst	16	1,524	105	(54, 156)
0009	Andover	17	5,988	28	(15, 42)
0010	Arlington	22	4,539	48	(28, 69)
0014	Ashland	5	2,570	19	(2, 36)
0016	Attleboro	6	6,766	9	(2, 16)
0017	Auburn	10	2,434	41	(16, 66)
0018	Avon	1	739	NC	NC
0019	Ayer	10	1,400	71	(27, 116)
0020	Barnstable	25	6,278	40	(24, 55)
0023	Bedford	18	2,289	79	(42, 115)
0024	Belchertown	13	2,472	53	(24, 81)
0025	Bellingham	8	2,855	28	(9, 47)
0026	Belmont	21	3,662	57	(33, 82)
0027	Berkley	3	994	NC	NC
0028	Berlin	6	262	229	(48, 410)
0030	Beverly	36	4,745	76	(51, 101)
0031	Billerica	21	6,361	33	(19, 47)
0035	Boston	251	61,975	41	(35, 46)
0036	Bourne	7	2,626	27	(7, 46)
0037	Boxborough	7	619	113	(30, 196)
0038	Boxford	6	998	60	(12, 108)
0039	Boylston	7	379	185	(49, 320)
0040	Braintree	16	4,991	32	(16, 48)
0041	Brewster	1	591	NC	NC
0043	Brimfield	4	371	NC	NC
0044	Brockton	50	16,801	30	(22, 38)
0045	Brookfield	2	297	NC	NC
0046	Brookline	40	6,111	65	(45, 86)
0048	Burlington	5	3,622	14	(2, 26)
0049	Cambridge	21	6,993	30	(17, 43)
0050	Canton	10	2,998	33	(13, 54)
0051	Carlisle	11	835	132	(54, 209)
0052	Carver	7	2,156	32	(8, 56)
0055	Chatham	2	739	NC	NC
0056	Chelmsford	38	5,770	66	(45, 87)
0057	Chelsea	19	5,879	32	(18, 47)
0061	Chicopee	16	7,792	21	(10, 31)

**Massachusetts Department of Education
Autism Counts by School District
School Year 2002-2003**

District	Autism Count	Total Enrollment	Prevalence per 10,000	95% CI	
0063	Clarksburg	0	210	NC	NC
0064	Clinton	9	2,012	45	(16, 74)
0065	Cohasset	5	1,392	36	(4, 67)
0067	Concord	18	2,048	88	(47, 128)
0068	Conway	0	149	NC	NC
0071	Danvers	19	3,745	51	(28, 73)
0072	Dartmouth	17	4,278	40	(21, 59)
0073	Dedham	20	3,027	66	(37, 95)
0074	Deerfield	6	441	136	(28, 244)
0077	Douglas	8	1,486	54	(17, 91)
0078	Dover	7	604	116	(31, 201)
0079	Dracut	20	4,281	47	(26, 67)
0082	Duxbury	8	3,256	25	(8, 42)
0083	East Bridgewater	2	2,490	NC	NC
0085	Eastham	0	258	NC	NC
0086	Easthampton	9	1,723	52	(18, 86)
0087	East Longmeadow	12	2,765	43	(19, 68)
0088	Easton	8	3,876	21	(6, 35)
0089	Edgartown	1	358	NC	NC
0091	Erving	1	168	NC	NC
0093	Everett	22	5,453	40	(24, 57)
0094	Fairhaven	8	2,346	34	(11, 58)
0095	Fall River	50	12,201	41	(30, 52)
0096	Falmouth	9	4,607	20	(7, 32)
0097	Fitchburg	27	6,059	45	(28, 61)
0098	Florida	0	115	NC	NC
0099	Foxborough	11	2,877	38	(16, 61)
0100	Framingham	52	8,504	61	(45, 78)
0101	Franklin	32	5,758	56	(36, 75)
0102	Freetown	6	524	115	(23, 206)
0103	Gardner	9	3,272	28	(10, 45)
0105	Georgetown	10	1,638	61	(23, 99)
0107	Gloucester	19	4,190	45	(25, 66)
0110	Grafton	9	2,302	39	(14, 65)
0111	Granby	8	1,126	71	(22, 120)
0112	Granville	1	263	NC	NC
0114	Greenfield	15	2,260	66	(33, 100)
0117	Hadley	1	640	NC	NC
0118	Halifax	5	732	68	(9, 128)
0121	Hancock	0	57	NC	NC
0122	Hanover	16	2,751	58	(30, 87)
0125	Harvard	8	1,244	64	(20, 109)
0126	Harwich	5	1,510	33	(4, 62)
0127	Hatfield	2	495	NC	NC

**Massachusetts Department of Education
Autism Counts by School District
School Year 2002-2003**

District	Autism Count	Total Enrollment	Prevalence per 10,000	95% CI
0128	Haverhill	28	8,351	34 (21, 46)
0131	Hingham	24	3,586	67 (40, 94)
0133	Holbrook	5	1,461	34 (4, 64)
0135	Holland	0	271	NC NC
0136	Holliston	18	3,113	58 (31, 84)
0137	Holyoke	28	7,331	38 (24, 52)
0138	Hopedale	7	1,222	57 (15, 100)
0139	Hopkinton	9	2,924	31 (11, 51)
0141	Hudson	12	2,769	43 (19, 68)
0142	Hull	8	1,320	61 (19, 102)
0144	Ipswich	12	2,076	58 (25, 90)
0145	Kingston	7	1,256	56 (15, 97)
0146	Lakeville	3	721	NC NC
0148	Lanesborough	3	307	NC NC
0149	Lawrence	39	12,729	31 (21, 40)
0150	Lee	5	899	56 (7, 104)
0151	Leicester	2	1,947	NC NC
0152	Lenox	0	825	NC NC
0153	Leominster	30	6,237	48 (31, 65)
0154	Leverett	0	140	NC NC
0155	Lexington	57	6,151	93 (69, 117)
0157	Lincoln	19	1,379	138 (76, 199)
0158	Littleton	10	1,579	63 (24, 102)
0159	Longmeadow	20	3,356	60 (34, 86)
0160	Lowell	54	15,497	35 (26, 44)
0161	Ludlow	34	3,087	110 (73, 147)
0162	Lunenburg	3	1,891	NC NC
0163	Lynn	30	15,259	20 (13, 27)
0164	Lynnfield	6	2,005	30 (6, 54)
0165	Malden	44	5,935	74 (52, 96)
0167	Mansfield	34	4,531	75 (50, 100)
0168	Marblehead	17	2,977	57 (30, 84)
0169	Marion	4	501	NC NC
0170	Marlborough	65	4,818	135 (102, 167)
0171	Marshfield	5	4,690	11 (1, 20)
0172	Mashpee	12	2,214	54 (24, 85)
0173	Mattapoissett	3	557	NC NC
0174	Maynard	8	1,433	56 (17, 94)
0175	Medfield	13	3,002	43 (20, 67)
0176	Medford	25	4,772	52 (32, 73)
0177	Medway	8	2,878	28 (9, 47)
0178	Melrose	10	3,534	28 (11, 46)
0181	Methuen	39	7,156	54 (37, 72)
0182	Middleborough	12	3,734	32 (14, 50)

**Massachusetts Department of Education
Autism Counts by School District
School Year 2002-2003**

District	Autism Count	Total Enrollment	Prevalence per 10,000	95% CI	
0184	Middleton	9	703	128	(45, 211)
0185	Milford	13	4,136	31	(14, 48)
0186	Millbury	5	1,934	26	(3, 48)
0187	Millis	12	1,341	89	(39, 140)
0189	Milton	22	3,650	60	(35, 85)
0191	Monson	5	1,479	34	(4, 63)
0196	Nahant	0	215	NC	NC
0197	Nantucket	2	1,149	NC	NC
0198	Natick	43	4,617	93	(65, 121)
0199	Needham	26	4,682	56	(34, 77)
0201	New Bedford	42	14,678	29	(20, 37)
0204	Newburyport	14	2,392	59	(28, 89)
0207	Newton	82	11,455	72	(56, 87)
0208	Norfolk	7	1,162	60	(16, 105)
0209	North Adams	12	2,126	56	(25, 88)
0210	Northampton	10	2,939	34	(13, 55)
0211	North Andover	21	4,369	48	(28, 69)
0212	North Attleborough	13	4,723	28	(13, 42)
0213	Northborough	27	2,013	134	(84, 184)
0214	Northbridge	18	2,499	72	(39, 105)
0215	North Brookfield	2	817	NC	NC
0217	North Reading	11	2,635	42	(17, 66)
0218	Norton	12	3,228	37	(16, 58)
0219	Norwell	13	2,034	64	(29, 99)
0220	Norwood	16	3,793	42	(22, 63)
0221	Oak Bluffs	3	443	NC	NC
0223	Orange	2	799	NC	NC
0224	Orleans	2	229	NC	NC
0226	Oxford	12	2,282	53	(23, 82)
0227	Palmer	1	2,128	NC	NC
0229	Peabody	26	6,711	39	(24, 54)
0230	Pelham	1	111	NC	NC
0231	Pembroke	11	1,918	57	(24, 91)
0234	Petersham	2	109	NC	NC
0236	Pittsfield	30	6,725	45	(29, 61)
0238	Plainville	10	816	123	(47, 198)
0239	Plymouth	28	8,983	31	(20, 43)
0240	Plympton	0	265	NC	NC
0242	Provincetown	3	293	NC	NC
0243	Quincy	72	8,950	80	(62, 99)
0244	Randolph	27	4,036	67	(42, 92)
0246	Reading	18	4,357	41	(22, 60)
0248	Revere	15	5,989	25	(12, 38)
0249	Richmond	0	190	NC	NC

**Massachusetts Department of Education
Autism Counts by School District
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District		Autism Count	Total Enrollment	Prevalence per 10,000	95% CI
0250	Rochester	3	504	NC	NC
0251	Rockland	20	2,821	71	(40, 102)
0252	Rockport	1	1,073	NC	NC
0253	Rowe	0	51	NC	NC
0258	Salem	23	5,095	45	(27, 64)
0261	Sandwich	23	4,195	55	(32, 77)
0262	Saugus	8	3,403	24	(7, 40)
0263	Savoy	0	55	NC	NC
0264	Scituate	19	3,146	60	(33, 87)
0265	Seekonk	13	2,344	55	(25, 86)
0266	Sharon	19	3,595	53	(29, 77)
0269	Sherborn	7	449	156	(41, 270)
0270	Shirley	2	777	NC	NC
0271	Shrewsbury	36	5,343	67	(45, 89)
0272	Shutesbury	1	184	NC	NC
0273	Somerset	7	2,929	24	(6, 42)
0274	Somerville	13	5,825	22	(10, 34)
0275	Southampton	1	540	NC	NC
0276	Southborough	10	1,633	61	(23, 99)
0277	Southbridge	8	2,694	30	(9, 50)
0278	South Hadley	8	2,313	35	(11, 59)
0281	Springfield	3	26,775	NC	NC
0284	Stoneham	12	3,003	40	(17, 63)
0285	Stoughton	17	4,162	41	(21, 60)
0287	Sturbridge	5	834	60	(8, 112)
0288	Sudbury	20	3,110	64	(36, 92)
0289	Sunderland	1	280	NC	NC
0290	Sutton	8	1,631	49	(15, 83)
0291	Swampscott	18	2,379	76	(41, 110)
0292	Swansea	8	2,261	35	(11, 60)
0293	Taunton	8	8,482	9	(3, 16)
0295	Tewksbury	20	4,791	42	(23, 60)
0296	Tisbury	2	320	NC	NC
0298	Topsfield	3	745	NC	NC
0300	Truro	2	115	NC	NC
0301	Tyngsborough	16	2,242	71	(37, 106)
0304	Uxbridge	8	2,364	34	(10, 57)
0305	Wakefield	22	3,467	63	(37, 90)
0306	Wales	0	156	NC	NC
0307	Walpole	21	3,728	56	(32, 80)
0308	Waltham	17	4,876	35	(18, 51)
0309	Ware	7	1,342	52	(14, 91)
0310	Wareham	11	3,523	31	(13, 50)
0314	Watertown	9	2,446	37	(13, 61)

**Massachusetts Department of Education
Autism Counts by School District
School Year 2002-2003**

District	Autism Count	Total Enrollment	Prevalence per 10,000	95% CI	
0315	Wayland	3	2,939	NC	NC
0316	Webster	5	1,896	26	(3, 49)
0317	Wellesley	23	4,128	56	(33, 78)
0318	Wellfleet	0	131	NC	NC
0321	Westborough	21	3,558	59	(34, 84)
0322	West Boylston	10	1,184	84	(32, 137)
0323	West Bridgewater	5	1,038	48	(6, 90)
0325	Westfield	27	6,741	40	(25, 55)
0326	Westford	22	4,941	45	(26, 63)
0327	Westhampton	1	144	NC	NC
0330	Weston	14	2,366	59	(28, 90)
0331	Westport	10	1,980	51	(19, 82)
0332	West Springfield	12	4,009	30	(13, 47)
0335	Westwood	15	2,698	56	(28, 84)
0336	Weymouth	44	7,158	61	(43, 80)
0337	Whately	0	137	NC	NC
0340	Williamsburg	1	225	NC	NC
0341	Williamstown	7	547	128	(34, 222)
0342	Wilmington	10	3,847	26	(10, 42)
0343	Winchendon	3	1,929	NC	NC
0344	Winchester	15	3,531	42	(21, 64)
0346	Winthrop	10	2,157	46	(18, 75)
0347	Woburn	9	4,689	19	(7, 32)
0348	Worcester	105	25,971	40	(33, 48)
0350	Wrentham	6	1,277	47	(9, 84)
0406	Northampton-Smith	1	447	NC	NC
0412	Academy Of Pacific Rim Ch	1	294	NC	NC
0415	Acad/Strategic Learn HMCS	0	35	NC	NC
0418	Framingham Community Ch	0	97	NC	NC
0420	Benjamin Banneker Charter	0	322	NC	NC
0423	Barnstable Grade 5 HMCS	0	525	NC	NC
0424	Boston Evening Acad HMCS	0	151	NC	NC
0428	Edward Brooke Charter	0	85	NC	NC
0432	Cape Cod Lighthouse Chart	0	180	NC	NC
0434	Champion HMCS	0	99	NC	NC
0435	Murdoch Middle Charter	0	247	NC	NC
0437	City On A Hill Charter	0	254	NC	NC
0438	Codman Academy Ch	0	60	NC	NC
0439	Conservatory Lab Charter	0	117	NC	NC
0440	Community Day Charter Sch	1	306	NC	NC
0441	Sabis International	0	1,311	NC	NC
0442	Frederick Douglass CS	0	193	NC	NC
0444	Neighborhood House Chart	0	206	NC	NC
0445	Abby Kelley Foster Reg Ch	0	858	NC	NC

**Massachusetts Department of Education
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District	Autism Count	Total Enrollment	Prevalence per 10,000	95% CI	
0446	Sabis Foxboro Reg'l Chart	2	731	NC	NC
0447	Benjamin Franklin Charter	0	369	NC	NC
0449	S.Boston Harbor Acad Ch	2	273	NC	NC
0450	Hilltown Charter School	0	139	NC	NC
0451	Robert M. Hughes Charter	0	177	NC	NC
0452	Health Careers Acad HMCS	0	180	NC	NC
0454	Lawrence Family Dev Chart	0	473	NC	NC
0456	Lowell Community Charter	0	428	NC	NC
0458	Lowell Middlesex Acad Ch	0	103	NC	NC
0464	Marblehead Community Ch	0	173	NC	NC
0466	Martha's Vineyard Charter	0	159	NC	NC
0469	Media & Tech Charter	0	160	NC	NC
0470	Mystic Valley Adv Reg Ch	5	929	54	(7, 101)
0471	New Leadership HMCS	0	313	NC	NC
0472	New Bedford Global HMCS	1	247	NC	NC
0474	North Central Charter Ess	0	234	NC	NC
0478	Francis W Parker Charter	0	349	NC	NC
0479	Pioneer Valley Perf Arts	1	299	NC	NC
0481	Boston Renaissance Ch Sch	0	1,367	NC	NC
0482	River Valley Charter	0	256	NC	NC
0483	Rising Tide Charter Sch	1	220	NC	NC
0484	Roxbury Prep Charter	0	176	NC	NC
0486	Seven Hills Charter Sch	0	660	NC	NC
0487	Somerville Charter School	0	654	NC	NC
0488	South Shore Charter Sch	1	331	NC	NC
0489	Sturgis Charter School	0	286	NC	NC
0490	Uphams Corner Charter	1	74	NC	NC
0491	Atlantis Charter School	0	638	NC	NC
0600	Acton-Boxborough	7	2,549	27	(7, 48)
0603	Adams-Cheshire	10	1,879	53	(20, 86)
0605	Amherst-Pelham	9	2,067	44	(15, 72)
0610	Ashburnham-Westminster	11	2,487	44	(18, 70)
0615	Athol-Royalston	7	2,235	31	(8, 54)
0618	Berkshire Hills	9	1,518	59	(21, 98)
0620	Berlin-Boylston	3	452	NC	NC
0622	Blackstone-Millville	5	2,336	21	(3, 40)
0625	Bridgewater-Raynham	14	6,202	23	(11, 34)
0632	Chesterfield-Goshen	1	168	NC	NC
0635	Central Berkshire	3	2,318	NC	NC
0640	Concord-Carlisle	8	1,232	65	(20, 110)
0645	Dennis-Yarmouth	20	4,358	46	(26, 66)
0650	Dighton-Rehoboth	22	3,325	66	(39, 94)
0655	Dover-Sherborn	1	986	NC	NC
0658	Dudley-Charlton Reg	20	4,379	46	(26, 66)

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District	Autism Count	Total Enrollment	Prevalence per 10,000	95% CI	
0660	Nauset	3	1,856	NC	NC
0662	Farmington River Reg	2	179	NC	NC
0665	Freetown-Lakeville	2	1,843	NC	NC
0670	Frontier	3	690	NC	NC
0672	Gateway	4	1,469	NC	NC
0673	Groton-Dunstable	18	2,791	64	(35, 94)
0674	Gill-Montague	3	1,429	NC	NC
0675	Hamilton-Wenham	7	2,270	31	(8, 54)
0680	Hampden-Wilbraham	10	3,944	25	(10, 41)
0683	Hampshire	4	867	NC	NC
0685	Hawlemont	0	124	NC	NC
0690	King Philip	4	1,951	NC	NC
0695	Lincoln-Sudbury	2	1,391	NC	NC
0698	Manchester Essex Regional	9	1,236	73	(25, 120)
0700	Marthas Vineyard	1	804	NC	NC
0705	Masconomet	0	1,910	NC	NC
0710	Mendon-Upton	14	2,471	57	(27, 86)
0715	Mount Greylock	0	801	NC	NC
0717	Mohawk Trail	5	1,568	32	(4, 60)
0720	Narragansett	7	1,598	44	(11, 76)
0725	Nashoba	19	3,087	62	(34, 89)
0728	New Salem-Wendell	3	178	NC	NC
0730	Northboro-Southboro	4	1,159	NC	NC
0735	North Middlesex	33	4,678	71	(47, 95)
0740	Old Rochester	4	1,187	NC	NC
0745	Pentucket	14	3,459	40	(19, 62)
0750	Pioneer Valley	2	1,125	NC	NC
0753	Quabbin	4	3,244	NC	NC
0755	Ralph C Mahar	3	756	NC	NC
0760	Silver Lake	4	2,895	NC	NC
0765	Southern Berkshire	1	1,028	NC	NC
0766	Southwick-Tolland	8	1,874	43	(13, 72)
0767	Spencer-E Brookfield	6	2,252	27	(5, 48)
0770	Tantasqua	4	1,750	NC	NC
0773	Triton	16	3,593	45	(23, 66)
0774	Up-Island Regional	0	437	NC	NC
0775	Wachusett	27	6,916	39	(24, 54)
0778	Quaboag Regional	1	1,530	NC	NC
0780	Whitman-Hanson	19	4,551	42	(23, 60)
0801	Assabet Valley	0	885	NC	NC
0805	Blackstone Valley Reg	0	814	NC	NC
0806	Blue Hills Voc	0	836	NC	NC
0810	Bristol-Plymouth Voc Tech	0	860	NC	NC
0815	Cape Cod Region Voc Tech	1	664	NC	NC

**Massachusetts Department of Education
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District	Autism Count	Total Enrollment	Prevalence per 10,000	95% CI
0818 Franklin County	0	508	NC	NC
0821 Greater Fall River	0	1,141	NC	NC
0823 Greater Lawrence RVT	1	1,406	NC	NC
0825 Greater New Bedford	1	1,825	NC	NC
0828 Greater Lowell Voc Tec	2	1,880	NC	NC
0829 So Middlesex Voc Tech Reg	2	766	NC	NC
0830 Minuteman Voc Tech	1	728	NC	NC
0832 Montachusett Voc Tech Reg	5	1,137	44	(6, 82)
0851 Northern Berkshire Voc	0	427	NC	NC
0852 Nashoba Valley Tech	0	523	NC	NC
0853 Northeast Metro Voc	0	1,172	NC	NC
0854 North Shore Reg Voc	0	430	NC	NC
0855 Old Colony Reg Voc Tech	3	550	NC	NC
0860 Pathfinder Voc Tech	2	664	NC	NC
0871 Shawsheen Valley Voc Tech	2	1,182	NC	NC
0872 Southeastern Reg Voc Tech	0	1,161	NC	NC
0873 South Shore Reg Voc Tech	0	531	NC	NC
0876 Southern Worcester Cty VT	0	1,014	NC	NC
0878 Tri County	1	846	NC	NC
0879 Upper Cape Cod Voc Tech	0	608	NC	NC
0885 Whittier Voc	1	1,369	NC	NC
0910 Bristol County Agr	0	414	NC	NC
0913 Essex Agr Tech	0	396	NC	NC
0915 Norfolk County Agr	0	417	NC	NC

Appendix F

**Massachusetts Department of Education
Autism Counts by School District
School Year 2003-04**

District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0999	State Totals	4,876	991,478	49	(48, 51)
0001	Abington	15	2480	60	(30, 91)
0002	Acton	13	2544	51	(23, 79)
0003	Acushnet	3	1109	NC	NC
0005	Agawam	12	4445	27	(12, 42)
0007	Amesbury	12	2739	44	(19, 69)
0008	Amherst	13	1465	89	(41, 137)
0009	Andover	25	6006	42	(25, 58)
0010	Arlington	36	4513	80	(54, 106)
0014	Ashland	7	2619	27	(7, 47)
0016	Attleboro	25	6582	38	(23, 53)
0017	Auburn	15	2391	63	(31, 94)
0018	Avon	1	711	NC	NC
0019	Ayer	11	1403	78	(32, 125)
0020	Barnstable	21	5631	37	(21, 53)
0023	Bedford	15	2330	64	(32, 97)
0024	Belchertown	19	2558	74	(41, 108)
0025	Bellingham	13	2763	47	(22, 73)
0026	Belmont	21	3776	56	(32, 79)
0027	Berkley	3	1024	NC	NC
0028	Berlin	6	247	243	(51, 435)
0030	Beverly	43	4656	92	(65, 120)
0031	Billerica	25	6498	38	(23, 54)
0035	Boston	263	60629	43	(38, 49)
0036	Bourne	7	2548	27	(7, 48)
0037	Boxborough	10	628	159	(61, 257)
0038	Boxford	8	1041	77	(24, 130)
0039	Boylston	6	379	158	(33, 284)
0040	Braintree	24	5060	47	(28, 66)
0041	Brewster	2	537	NC	NC
0043	Brimfield	3	367	NC	NC
0044	Brockton	55	16576	33	(24, 42)
0045	Brookfield	2	304	NC	NC
0046	Brookline	50	6086	82	(59, 105)
0048	Burlington	6	3572	17	(3, 30)
0049	Cambridge	31	6633	47	(30, 63)
0050	Canton	14	3047	46	(22, 70)
0051	Carlisle	7	824	85	(22, 148)
0052	Carver	15	2126	71	(35, 106)
0055	Chatham	4	731	NC	NC
0056	Chelmsford	38	5847	65	(44, 86)
0057	Chelsea	19	5784	33	(18, 48)
0061	Chicopee	27	7608	35	(22, 49)
0063	Clarksburg	0	202	NC	NC
0064	Clinton	8	2051	39	(12, 66)

**Massachusetts Department of Education
Autism Counts by School District
School Year 2003-04**

District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0065	Cohasset	0	1469	NC	NC
0067	Concord	18	2038	88	(48, 129)
0068	Conway	0	152	NC	NC
0071	Danvers	23	3713	62	(37, 87)
0072	Dartmouth	19	4295	44	(24, 64)
0073	Dedham	22	3040	72	(42, 102)
0074	Deerfield	7	451	155	(41, 269)
0077	Douglas	8	1595	50	(15, 85)
0078	Dover	9	635	142	(50, 234)
0079	Dracut	30	4294	70	(45, 95)
0082	Duxbury	9	3318	27	(9, 45)
0083	East Bridgewater	3	2442	NC	NC
0085	Eastham	2	222	NC	NC
0086	Easthampton	14	1663	84	(40, 128)
0087	East Longmeadow	18	2812	64	(35, 93)
0088	Easton	14	3864	36	(17, 55)
0089	Edgartown	0	362	NC	NC
0091	Erving	1	169	NC	NC
0093	Everett	18	5418	33	(18, 49)
0094	Fairhaven	14	2275	62	(29, 94)
0095	Fall River	46	11796	39	(28, 50)
0096	Falmouth	15	4485	33	(17, 50)
0097	Fitchburg	35	5865	60	(40, 79)
0098	Florida	0	120	NC	NC
0099	Foxborough	19	2916	65	(36, 94)
0100	Framingham	56	8258	68	(50, 86)
0101	Franklin	35	5882	60	(40, 79)
0102	Freetown	3	521	NC	NC
0103	Gardner	11	3309	33	(14, 53)
0105	Georgetown	10	1632	61	(23, 99)
0107	Gloucester	22	4069	54	(32, 77)
0109	Gosnold	1	3	NC	NC
0110	Grafton	13	2471	43,333	(24, 81)
0111	Granby	6	1150	24	(11, 94)
0112	Granville	2	249	NC	NC
0114	Greenfield	17	2143	683	(42, 117)
0117	Hadley	3	656	NC	NC
0118	Halifax	3	724	NC	NC
0121	Hancock	0	58	NC	NC
0122	Hanover	16	2799	2,759	(29, 85)
0125	Harvard	11	1276	39	(35, 137)
0126	Harwich	6	1531	47	(8, 70)
0127	Hatfield	2	484	NC	NC
0128	Haverhill	41	8114	847	(35, 66)
0131	Hingham	18	3635	22	(27, 72)
0133	Holbrook	9	1444	25	(22, 103)

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0135	Holland	0	270	NC	NC
0136	Holliston	20	3152	741	(36, 91)
0137	Holyoke	33	7362	105	(30, 60)
0138	Hopedale	9	1286	12	(24, 116)
0139	Hopkinton	19	3376	148	(31, 82)
0141	Hudson	15	2771	44	(27, 81)
0142	Hull	10	1300	36	(29, 124)
0144	Ipswich	11	2108	85	(21, 83)
0145	Kingston	7	1235	33	(15, 99)
0146	Lakeville	3	768	NC	NC
0148	Lanesborough	4	297	NC	NC
0149	Lawrence	35	12710	1,178	(18, 37)
0150	Lee	5	875	4	(7, 107)
0151	Leicester	4	1976	NC	NC
0152	Lenox	0	836	NC	NC
0153	Leominster	40	6307	478	(44, 83)
0154	Leverett	0	133	NC	NC
0155	Lexington	58	6255	4,361	(69, 116)
0157	Lincoln	15	1322	24	(56, 171)
0158	Littleton	6	1589	45	(8, 68)
0159	Longmeadow	27	3437	170	(49, 108)
0160	Lowell	62	15210	180	(31, 51)
0161	Ludlow	12	3122	8	(17, 60)
0162	Lunenburg	6	1837	19	(7, 59)
0163	Lynn	47	14779	256	(23, 41)
0164	Lynnfield	7	2055	5	(9, 59)
0165	Malden	49	6186	238	(57, 101)
0167	Mansfield	56	4787	91	(87, 147)
0168	Marblehead	16	3039	33	(27, 78)
0169	Marion	2	480	NC	NC
0170	Marlborough	51	4928	1,063	(75, 132)
0171	Marshfield	27	4649	55	(36, 80)
0172	Mashpee	14	2179	30	(31, 98)
0173	Mattapoisett	6	528	28	(23, 204)
0174	Maynard	12	1418	227	(37, 132)
0175	Medfield	13	3070	92	(19, 65)
0176	Medford	36	4763	117	(51, 100)
0177	Medway	8	2913	17	(8, 46)
0178	Melrose	12	3611	41	(14, 52)
0181	Methuen	54	7329	150	(54, 93)
0182	Middleborough	12	3719	16	(14, 50)
0184	Middleton	7	798	19	(23, 152)
0185	Milford	15	4235	188	(18, 53)
0186	Millbury	6	2019	14	(6, 53)
0187	Millis	10	1331	50	(29, 122)
0189	Milton	24	3636	180	(40, 92)

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0191	Monson	7	1544	19	(12, 79)
0196	Nahant	0	214	NC	NC
0197	Nantucket	0	1175	NC	NC
0198	Natick	39	4656	332	(58, 110)
0199	Needham	31	4757	67	(42, 88)
0201	New Bedford	51	14665	107	(25, 44)
0204	Newburyport	10	2395	7	(16, 68)
0207	Newton	94	11534	392	(65, 98)
0208	Norfolk	4	1195	NC	NC
0209	North Adams	10	2096	84	(18, 77)
0210	Northampton	16	3016	76	(27, 79)
0211	North Andover	39	4413	129	(61, 116)
0212	North Attleborough	14	4712	32	(14, 45)
0213	Northborough	22	1953	47	(66, 159)
0214	Northbridge	14	2566	72	(26, 83)
0215	North Brookfield	2	792	NC	NC
0217	North Reading	15	2702	189	(27, 84)
0218	Norton	20	3216	74	(35, 89)
0219	Norwell	13	2078	40	(29, 96)
0220	Norwood	14	3787	67	(18, 56)
0221	Oak Bluffs	3	424	NC	NC
0223	Orange	2	786	NC	NC
0224	Orleans	2	231	NC	NC
0226	Oxford	20	2266	866	(50, 127)
0227	Palmer	8	2132	35	(12, 63)
0229	Peabody	29	6717	136	(27, 59)
0230	Pelham	0	116	NC	NC
0231	Pembroke	14	1952	1,207	(34, 109)
0234	Petersham	2	115	NC	NC
0236	Pittsfield	42	6625	3,652	(44, 83)
0238	Plainville	11	838	17	(54, 208)
0239	Plymouth	49	8824	585	(40, 71)
0240	Plympton	0	264	NC	NC
0242	Provincetown	1	261	NC	NC
0243	Quincy	79	9013	3,027	(68, 107)
0244	Randolph	28	3867	31	(46, 99)
0246	Reading	20	4322	52	(26, 67)
0248	Revere	17	5775	39	(15, 43)
0249	Richmond	0	205	NC	NC
0250	Rochester	3	542	NC	NC
0251	Rockland	30	2752	554	(70, 148)
0252	Rockport	5	1041	18	(6, 90)
0253	Rowe	0	57	NC	NC
0258	Salem	28	5015	4,912	(35, 76)
0261	Sandwich	26	4172	52	(38, 86)
0262	Saugus	15	3346	36	(22, 67)

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0263	Savoy	0	56	NC	NC
0264	Scituate	29	3178	5,179	(58, 124)
0265	Seekonk	11	2367	35	(19, 74)
0266	Sharon	25	3632	106	(42, 96)
0269	Sherborn	8	451	22	(56, 299)
0270	Shirley	5	776	111	(8, 121)
0271	Shrewsbury	29	5597	374	(33, 71)
0272	Shutesbury	1	174	NC	NC
0273	Somerset	7	2925	402	(6, 42)
0274	Somerville	14	5700	48	(12, 37)
0275	Southampton	2	552	NC	NC
0276	Southborough	17	1628	308	(55, 154)
0277	Southbridge	25	2671	154	(57, 130)
0278	South Hadley	9	2341	34	(13, 64)
0281	Springfield	76	26566	325	(22, 35)
0284	Stoneham	19	3025	7	(35, 91)
0285	Stoughton	18	4107	60	(24, 64)
0287	Sturbridge	8	822	19	(30, 164)
0288	Sudbury	25	3136	304	(49, 111)
0289	Sunderland	1	261	NC	NC
0290	Sutton	9	1669	345	(19, 89)
0291	Swampscott	20	2410	120	(47, 119)
0292	Swansea	11	2216	46	(20, 79)
0293	Taunton	20	8507	90	(13, 34)
0295	Tewksbury	18	4812	21	(20, 55)
0296	Tisbury	3	319	NC	NC
0298	Topsfield	3	755	NC	NC
0300	Truro	2	122	NC	NC
0301	Tyngsborough	15	2288	1,230	(32, 99)
0304	Uxbridge	12	2256	52	(23, 83)
0305	Wakefield	25	3484	111	(44, 100)
0306	Wales	0	178	NC	NC
0307	Walpole	17	3659	955	(24, 68)
0308	Waltham	22	4763	60	(27, 65)
0309	Ware	9	1315	19	(24, 113)
0310	Wareham	12	3513	91	(15, 53)
0314	Watertown	13	2422	37	(25, 83)
0315	Wayland	4	3002	NC	NC
0316	Webster	2	1857	NC	NC
0317	Wellesley	29	4306	156	(43, 92)
0318	Wellfleet	1	147	NC	NC
0321	Westborough	32	3550	2,177	(59, 121)
0322	West Boylston	11	1147	31	(40, 152)
0323	West Bridgewater	7	1030	61	(18, 118)
0325	Westfield	29	6610	282	(28, 60)
0326	Westford	30	5129	45	(38, 79)

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0327	Westhampton	1	147	NC	NC
0330	Weston	16	2384	1,088	(34, 100)
0331	Westport	11	1903	46	(24, 92)
0332	West Springfield	13	4006	68	(15, 50)
0335	Westwood	19	2800	47	(37, 98)
0336	Weymouth	42	7023	150	(42, 78)
0337	Whately	0	134	NC	NC
0340	Williamsburg	1	205	NC	NC
0341	Williamstown	5	542	244	(12, 173)
0342	Wilmington	13	3837	240	(15, 52)
0343	Winchendon	6	1904	16	(6, 57)
0344	Winchester	22	3601	116	(36, 87)
0346	Winthrop	6	2167	17	(6, 50)
0347	Woburn	25	4738	115	(32, 73)
0348	Worcester	130	25449	274	(42, 60)
0350	Wrentham	8	1275	3	(19, 106)
0406	Northampton-Smith	0	444	NC	NC
0410	Excel Academy Charter	0	101	NC	NC
0412	Academy Of Pacific Rim Ch	1	327	NC	NC
0413	Four Rivers Charter	0	64	NC	NC
0415	Acad/Strategic Learning HMCS	0	45	NC	NC
0418	Framingham Comm Charter	1	184	NC	NC
0419	Smith Leadership Academy	0	78	NC	NC
0420	Benjamin Banneker Charter	0	329	NC	NC
0422	Roxbury Charter High	0	62	NC	NC
0423	Barnstable Horace Mann Ch	1	961	NC	NC
0424	Boston Evening Acad HMCS	0	201	NC	NC
0428	Edward Brooke Charter	0	165	NC	NC
0432	Cape Cod Lighthouse Chart	0	180	NC	NC
0434	Champion HMCS	0	87	NC	NC
0435	Murdoch Middle Charter	2	263	NC	NC
0437	City On A Hill Charter	1	248	NC	NC
0438	Codman Academy	0	81	NC	NC
0439	Conservatory Lab Charter	0	126	NC	NC
0440	Community Day Charter Sch	1	306	NC	NC
0441	Sabis International	0	1343	NC	NC
0442	Frederick Douglass CS	0	268	NC	NC
0444	Neighborhood House Chart	0	221	NC	NC
0445	Abby Kelley Foster Reg Ch	0	889	NC	NC
0446	Sabis Foxboro Reg'l Chart	5	875	56	(7, 107)
0447	Benjamin Franklin Charter	0	381	NC	NC
0449	S.Boston Harbor Acad Ch	2	346	NC	NC
0450	Hilltown Charter School	0	146	NC	NC
0451	Robert M. Hughes Charter	0	177	NC	NC
0452	Health Careers Acad HMCS	0	182	NC	NC
0454	Lawrence Family Dev Chart	0	514	NC	NC

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0456	Lowell Community Charter	0	542	NC	NC
0458	Lowell Middlesex Acad Ch	0	108	NC	NC
0464	Marblehead Community Ch	2	177	NC	NC
0466	Martha's Vineyard Charter	0	154	NC	NC
0469	Media and Tech Charter High	0	170	NC	NC
0470	Mystic Valley Adv Reg Ch	2	1022	NC	NC
0471	New Leadership HMCS	0	378	NC	NC
0472	New Bedford Global HMCS	1	237	NC	NC
0474	North Central Charter Essen	0	305	NC	NC
0478	Francis W Parker Charter	0	356	NC	NC
0479	Pioneer Valley Perf Arts	2	329	NC	NC
0481	Boston Renaissance Ch Sch	1	1400	NC	NC
0482	River Valley Charter	1	287	NC	NC
0483	Rising Tide Charter Sch	19	231	136	(468, 1177)
0484	Roxbury Prep Charter	0	179	NC	NC
0486	Seven Hills Charter Sch	0	647	NC	NC
0487	Prospect Hill Academy Charter	1	733	NC	NC
0488	South Shore Charter Sch	2	366	NC	NC
0489	Sturgis Charter School	2	325	NC	NC
0490	Uphams Corner Charter	1	80	NC	NC
0491	Atlantis Charter School	0	693	NC	NC
0600	Acton-Boxborough	5	2667	625	(2, 35)
0603	Adams-Cheshire	9	1859	130	(17, 80)
0605	Amherst-Pelham	13	2073	49	(29, 97)
0610	Ashburnham-Westminster	15	2465	81	(30, 92)
0615	Athol-Royalston	10	2224	48	(17, 73)
0618	Berkshire Hills	9	1415	37	(22, 105)
0620	Berlin-Boylston	1	470	NC	NC
0622	Blackstone-Millville	3	2317	NC	NC
0625	Bridgewater-Raynham	24	6114	511	(24, 55)
0632	Chesterfield-Goshen	1	177	NC	NC
0635	Central Berkshire	5	2287	8	(3, 41)
0640	Concord-Carlisle	3	1230	NC	NC
0645	Dennis-Yarmouth	20	4236	87	(27, 68)
0650	Dighton-Rehoboth	23	3403	187	(40, 95)
0655	Dover-Sherborn	0	1032	NC	NC
0658	Dudley-Charlton Reg	22	4386	65	(29, 71)
0660	Nauset	5	1842	48	(3, 51)
0662	Farmington River Reg	2	190	NC	NC
0665	Freetown-Lakeville	3	1907	NC	NC
0670	Frontier	4	732	NC	NC
0672	Gateway	7	1408	37	(13, 86)
0673	Groton-Dunstable	22	2916	301	(44, 107)
0674	Gill-Montague	7	1285	50	(14, 95)
0675	Hamilton-Wenham	1	2234	NC	NC

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0680	Hampden-Wilbraham	9	3914	70	(8, 38)
0683	Hampshire	3	859	NC	NC
0685	Hawlemont	0	129	NC	NC
0690	King Philip	5	1976	58	(3, 47)
0695	Lincoln-Sudbury	1	1435	NC	NC
0698	Manchester-Essex	8	1251	40	(20, 108)
0700	Marthas Vineyard	3	813	NC	NC
0705	Masconomet	4	2013	NC	NC
0710	Mendon-Upton	19	2603	234	(40, 106)
0715	Mount Greylock	1	770	NC	NC
0717	Mohawk Trail	7	1543	27	(12, 79)
0720	Narragansett	6	1647	78	(7, 66)
0725	Nashoba	18	3095	117	(31, 85)
0728	New Salem-Wendell	2	157	NC	NC
0730	Northboro-Southboro	3	1251	NC	NC
0735	North Middlesex	36	4698	2,293	(52, 102)
0740	Old Rochester	7	1247	56	(15, 98)
0745	Pentucket	18	3510	38	(28, 75)
0750	Pioneer Valley	2	1098	NC	NC
0753	Quabbin	5	3261	14	(2, 29)
0755	Ralph C Mahar	2	742	NC	NC
0760	Silver Lake	5	2949	15	(2, 32)
0765	Southern Berkshire	3	1024	NC	NC
0766	Southwick-Tolland	7	1932	24	(9, 63)
0767	Spencer-E Brookfield	6	2283	59	(5, 47)
0770	Tantasqua	5	1789	26	(3, 52)
0773	Triton	20	3593	88	(31, 80)
0774	Up-Island Regional	1	393	NC	NC
0775	Wachusett	35	7068	97	(33, 66)
0778	Quaboag Regional	6	1506	153	(8, 72)
0780	Whitman-Hanson	20	4500	28	(25, 64)
0801	Assabet Valley	0	897	NC	NC
0805	Blackstone Valley Reg	0	821	NC	NC
0806	Blue Hills Voc	0	809	NC	NC
0810	Bristol-Plymouth Voc Tech	0	898	NC	NC
0815	Cape Cod Region Voc Tech	0	699	NC	NC
0818	Franklin County	0	526	NC	NC
0821	Greater Fall River	2	1196	NC	NC
0823	Greater Lawrence RVT	0	1480	NC	NC
0825	Greater New Bedford	1	1856	NC	NC
0828	Greater Lowell Voc Tec	7	1909	47	(10, 64)
0829	So Middlesex Voc Tech Reg	2	735	NC	NC
0830	Minute Man Voc Tech	1	715	NC	NC
0832	Montachusett Voc Tech Reg	4	1167	NC	NC
0851	Northern Berkshire Voc	0	440	NC	NC
0852	Nashoba Valley Tech	0	495	NC	NC

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0853	Northeast Metro Voc	0	1190	NC	NC
0854	North Shore Reg Voc	0	442	NC	NC
0855	Old Colony Reg Voc Tech	3	560	NC	NC
0860	Pathfinder Voc Tech	1	651	NC	NC
0871	Shawsheen Valley Voc Tech	1	1210	NC	NC
0872	Southeastern Reg Voc Tech	1	1180	NC	NC
0873	South Shore Reg Voc Tech	2	554	NC	NC
0876	Southern Worcester Cty VT	0	1036	NC	NC
0878	Tri County	1	867	NC	NC
0879	Upper Cape Cod Voc Tech	0	616	NC	NC
0885	Whittier Voc	2	1410	NC	NC
0910	Bristol County Agr	0	415	NC	NC
0913	Essex Agr Tech	1	407	NC	NC
0915	Norfolk County Agr	0	421	NC	NC

Appendix G

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0999	State Totals	5,467	986,662	55	(54, 57)
0001	Abington	15	2,422	62	(31, 93)
0002	Acton	13	2,594	50	(23, 77)
0003	Acushnet	14	1,145	122	(59, 186)
0005	Agawam	15	4,453	34	(17, 51)
0007	Amesbury	12	2,627	46	(20, 71)
0008	Amherst	17	1,486	114	(60, 168)
0009	Andover	23	6,034	38	(23, 54)
0010	Arlington	36	4,579	79	(53, 104)
0014	Ashland	8	2,660	30	(9, 51)
0016	Attleboro	35	6,367	55	(37, 73)
0017	Auburn	17	2,361	72	(38, 106)
0018	Avon	1	731	NC	NC
0019	Ayer	11	1,383	80	(33, 126)
0020	Barnstable	24	5,148	47	(28, 65)
0023	Bedford	18	2,368	76	(41, 111)
0024	Belchertown	18	2,585	70	(38, 102)
0025	Bellingham	15	2,724	55	(27, 83)
0026	Belmont	24	3,774	64	(38, 89)
0027	Berkley	5	1,037	48	(6, 90)
0028	Berlin	5	257	195	(26, 363)
0030	Beverly	44	4,625	95	(67, 123)
0031	Billerica	39	6,465	60	(41, 79)
0035	Boston	300	58,202	52	(46, 57)
0036	Bourne	7	2,568	27	(7, 47)
0037	Boxborough	9	601	150	(53, 247)
0038	Boxford	8	1,010	79	(25, 134)
0039	Boylston	6	377	159	(33, 285)
0040	Braintree	24	5,172	46	(28, 65)
0041	Brewster	4	521	NC	NC
0043	Brimfield	2	357	NC	NC
0044	Brockton	64	16,230	39	(30, 49)
0045	Brookfield	1	322	NC	NC
0046	Brookline	28	6,051	46	(29, 63)
0048	Burlington	13	3,621	36	(16, 55)
0049	Cambridge	37	6,351	58	(40, 77)
0050	Canton	17	3,032	56	(29, 83)
0051	Carlisle	9	831	108	(38, 179)
0052	Carver	20	2,096	95	(54, 137)
0055	Chatham	5	717	70	(9, 131)
0056	Chelmsford	39	5,802	67	(46, 88)
0057	Chelsea	25	5,644	44	(27, 62)
0061	Chicopee	37	7,668	48	(33, 64)

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District Code	District Name	Autism Count	School Enrollment	Prevalence per 10,000	95 % CI
0063	Clarksburg	0	199	NC	NC
0064	Clinton	9	2,024	44	(15, 73)
0065	Cohasset	0	1,526	NC	NC
0067	Concord	16	2,038	79	(40, 117)
0068	Conway	1	152	NC	NC
0071	Danvers	26	3,684	71	(44, 98)
0072	Dartmouth	27	4,341	62	(39, 86)
0073	Dedham	27	2,987	90	(56, 124)
0074	Deerfield	7	448	156	(41, 271)
0077	Douglas	8	1,718	47	(14, 79)
0078	Dover	10	637	157	(60, 254)
0079	Dracut	20	4,222	47	(27, 68)
0082	Duxbury	13	3,324	39	(18, 60)
0083	East Bridgewater	12	2,526	48	(21, 74)
0085	Eastham	0	204	NC	NC
0086	Easthampton	11	1,655	66	(27, 106)
0087	East Longmeadow	23	2,846	81	(48, 114)
0088	Easton	16	3,884	41	(21, 61)
0089	Edgartown	0	351	NC	NC
0091	Erving	0	177	NC	NC
0093	Everett	19	5,430	35	(19, 51)
0094	Fairhaven	16	2,298	70	(36, 104)
0095	Fall River	53	11,442	46	(34, 59)
0096	Falmouth	24	4,308	56	(33, 78)
0097	Fitchburg	46	5,712	81	(57, 104)
0098	Florida	0	111	NC	NC
0099	Foxborough	17	2,973	57	(30, 84)
0100	Framingham	60	8,208	73	(55, 92)
0101	Franklin	47	6,022	78	(56, 100)
0102	Freetown	2	512	NC	NC
0103	Gardner	11	3,255	34	(14, 54)
0105	Georgetown	11	1,688	65	(27, 104)
0107	Gloucester	21	4,018	52	(30, 75)
0109	Gosnold	0	3	NC	NC
0110	Grafton	12	2,535	47	(21, 74)
0111	Granby	9	1,162	77	(27, 128)
0112	Granville	2	239	NC	NC
0114	Greenfield	20	1,974	101	(57, 145)
0117	Hadley	3	650	NC	NC
0118	Halifax	3	728	NC	NC
0121	Hancock	0	61	NC	NC
0122	Hanover	16	2,834	56	(29, 84)
0125	Harvard	15	1,286	117	(58, 175)
0126	Harwich	5	1,490	34	(4, 63)
0127	Hatfield	2	483	NC	NC

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0128	Haverhill	61	7,851	78	(58, 97)
0131	Hingham	21	3,718	56	(32, 81)
0133	Holbrook	10	1,412	71	(27, 115)
0135	Holland	0	264	NC	NC
0136	Holliston	20	3,083	65	(37, 93)
0137	Holyoke	36	7,165	50	(34, 67)
0138	Hopedale	6	1,270	47	(10, 85)
0139	Hopkinton	21	3,427	61	(35, 87)
0141	Hudson	16	2,782	58	(29, 86)
0142	Hull	9	1,332	68	(24, 112)
0144	Ipswich	13	2,108	62	(28, 95)
0145	Kingston	10	1,211	83	(32, 134)
0146	Lakeville	3	783	NC	NC
0148	Lanesborough	4	297	NC	NC
0149	Lawrence	47	12,421	38	(27, 49)
0150	Lee	4	873	NC	NC
0151	Leicester	6	1,921	31	(6, 56)
0152	Lenox	0	854	NC	NC
0153	Leominster	48	6,282	76	(55, 98)
0154	Leverett	0	139	NC	NC
0155	Lexington	58	6,237	93	(69, 117)
0157	Lincoln	10	1,263	79	(30, 128)
0158	Littleton	17	1,563	109	(57, 160)
0159	Longmeadow	30	3,398	88	(57, 120)
0160	Lowell	85	14,690	58	(46, 70)
0161	Ludlow	11	3,165	35	(14, 55)
0162	Lunenburg	7	1,831	38	(10, 66)
0163	Lynn	49	14,240	34	(25, 44)
0164	Lynnfield	15	2,125	71	(35, 106)
0165	Malden	49	6,289	78	(56, 100)
0167	Mansfield	58	4,818	120	(90, 151)
0168	Marblehead	18	3,089	58	(31, 85)
0169	Marion	5	451	111	(14, 208)
0170	Marlborough	60	4,851	124	(93, 155)
0171	Marshfield	32	4,694	68	(45, 92)
0172	Mashpee	12	2,130	56	(25, 88)
0173	Mattapoisett	7	517	135	(36, 235)
0174	Maynard	10	1,398	72	(27, 116)
0175	Medfield	16	3,126	51	(26, 76)
0176	Medford	43	4,864	88	(62, 115)
0177	Medway	11	2,904	38	(16, 60)
0178	Melrose	9	3,626	25	(9, 41)
0181	Methuen	62	7,401	84	(63, 105)
0182	Middleborough	14	3,627	39	(18, 59)
0184	Middleton	6	840	71	(14, 128)

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0185	Milford	19	4,257	45	(25, 65)
0186	Millbury	7	1,988	35	(9, 61)
0187	Millis	12	1,351	89	(39, 139)
0189	Milton	25	3,666	68	(42, 95)
0191	Monson	7	1,570	45	(12, 78)
0196	Nahant	1	225	NC	NC
0197	Nantucket	1	1,224	NC	NC
0198	Natick	41	4,629	89	(62, 116)
0199	Needham	38	4,933	77	(53, 101)
0201	New Bedford	54	14,260	38	(28, 48)
0204	Newburyport	13	2,395	54	(25, 84)
0207	Newton	113	11,547	98	(80, 116)
0208	Norfolk	4	1,156	NC	NC
0209	North Adams	11	2,023	54	(22, 86)
0210	Northampton	14	3,024	46	(22, 70)
0211	North Andover	42	4,543	92	(65, 120)
0212	North Attleborough	14	4,767	29	(14, 45)
0213	Northborough	23	1,995	115	(68, 162)
0214	Northbridge	16	2,665	60	(31, 89)
0215	North Brookfield	2	793	NC	NC
0217	North Reading	18	2,741	66	(35, 96)
0218	Norton	20	3,259	61	(35, 88)
0219	Norwell	11	2,141	51	(21, 82)
0220	Norwood	19	3,730	51	(28, 74)
0221	Oak Bluffs	2	440	NC	NC
0223	Orange	2	769	NC	NC
0224	Orleans	2	229	NC	NC
0226	Oxford	20	2,218	90	(51, 130)
0227	Palmer	7	2,050	34	(9, 59)
0229	Peabody	39	6,714	58	(40, 76)
0230	Pelham	2	112	NC	NC
0231	Pembroke	16	3,224	50	(25, 74)
0234	Petersham	2	123	NC	NC
0236	Pittsfield	39	6,527	60	(41, 78)
0238	Plainville	15	833	180	(90, 270)
0239	Plymouth	59	8,700	68	(51, 85)
0240	Plympton	0	238	NC	NC
0242	Provincetown	2	252	NC	NC
0243	Quincy	87	8,922	98	(77, 118)
0244	Randolph	28	3,680	76	(48, 104)
0246	Reading	23	4,357	53	(31, 74)
0248	Revere	16	5,684	28	(14, 42)
0249	Richmond	0	195	NC	NC
0250	Rochester	5	556	90	(11, 168)
0251	Rockland	27	2,681	101	(63, 139)

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0252	Rockport	5	1,050	48	(6, 89)
0253	Rowe	0	62	NC	NC
0258	Salem	15	4,820	31	(15, 47)
0261	Sandwich	26	4,100	63	(39, 88)
0262	Saugus	11	3,210	34	(14, 54)
0263	Savoy	0	71	NC	NC
0264	Scituate	30	3,263	92	(59, 125)
0265	Seekonk	15	2,368	63	(31, 95)
0266	Sharon	30	3,591	84	(54, 113)
0269	Sherborn	6	498	120	(25, 216)
0270	Shirley	8	744	108	(33, 182)
0271	Shrewsbury	37	5,766	64	(44, 85)
0272	Shutesbury	1	163	NC	NC
0273	Somerset	9	2,902	31	(11, 51)
0274	Somerville	18	5,446	33	(18, 48)
0275	Southampton	3	523	NC	NC
0276	Southborough	20	1,651	121	(68, 174)
0277	Southbridge	23	2,595	89	(53, 125)
0278	South Hadley	14	2,368	59	(28, 90)
0281	Springfield	96	26,359	36	(29, 44)
0284	Stoneham	19	3,019	63	(35, 91)
0285	Stoughton	22	4,066	54	(32, 77)
0287	Sturbridge	7	859	81	(21, 142)
0288	Sudbury	23	3,242	71	(42, 100)
0289	Sunderland	5	246	203	(27, 380)
0290	Sutton	9	1,687	53	(19, 88)
0291	Swampscott	16	2,439	66	(34, 98)
0292	Swansea	10	2,096	48	(18, 77)
0293	Taunton	22	8,498	26	(15, 37)
0295	Tewksbury	30	4,888	61	(39, 83)
0296	Tisbury	3	312	NC	NC
0298	Topsfield	8	739	108	(34, 183)
0300	Truro	0	116	NC	NC
0301	Tyngsborough	14	2,300	61	(29, 93)
0304	Uxbridge	14	2,148	65	(31, 99)
0305	Wakefield	25	3,509	71	(43, 99)
0306	Wales	0	184	NC	NC
0307	Walpole	26	3,815	68	(42, 94)
0308	Waltham	22	4,778	46	(27, 65)
0309	Ware	6	1,263	48	(10, 85)
0310	Wareham	18	3,444	52	(28, 76)
0314	Watertown	19	2,442	78	(43, 113)
0315	Wayland	2	2,955	NC	NC
0316	Webster	13	1,893	69	(31, 106)
0317	Wellesley	31	4,452	70	(45, 94)

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0318	Wellfleet	1	141	NC	NC
0321	Westborough	38	3,548	107	(73, 141)
0322	West Boylston	14	1,147	122	(59, 186)
0323	West Bridgewater	10	1,141	88	(34, 142)
0325	Westfield	30	6,626	45	(29, 61)
0326	Westford	27	5,148	52	(33, 72)
0327	Westhampton	1	156	NC	NC
0330	Weston	17	2,372	72	(38, 106)
0331	Westport	9	1,872	48	(17, 79)
0332	West Springfield	19	3,957	48	(26, 70)
0335	Westwood	20	2,868	70	(39, 100)
0336	Weymouth	49	6,993	70	(51, 90)
0337	Whately	0	136	NC	NC
0340	Williamsburg	2	211	NC	NC
0341	Williamstown	7	508	138	(36, 239)
0342	Wilmington	15	3,873	39	(19, 58)
0343	Winchendon	8	1,798	44	(14, 75)
0344	Winchester	25	3,715	67	(41, 94)
0346	Winthrop	5	2,067	24	(3, 45)
0347	Woburn	21	4,689	45	(26, 64)
0348	Worcester	134	24,963	54	(45, 63)
0350	Wrentham	4	1,288	NC	NC
0406	Northampton-Smith	0	437	NC	NC
0410	Excel Academy CS	0	194	NC	NC
0412	Academy Of Pacific Rim Ch	1	333	NC	NC
0413	Four Rivers CS	1	102	NC	NC
0414	Berkshire Arts and Tech CS	1	64	NC	NC
0415	Acad/Strategic Learn HMCS	0	50	NC	NC
0416	Boston Preparatory Charter	0	106	NC	NC
0418	Framingham Community CS	1	254	NC	NC
0419	Smith Leadership Academy	0	166	NC	NC
0420	Benjamin Banneker Charter	0	302	NC	NC
0422	Roxbury Charter HS	0	104	NC	NC
0423	Barnstable Grade 5 HMCS	2	893	NC	NC
0424	Boston Evening Acad HMCS	0	268	NC	NC
0427	Marston Mills East HMCS	0	351	NC	NC
0428	Edward Brooke CS	0	222	NC	NC
0429	Kipp Academy Charter	0	77	NC	NC
0432	Cape Cod Lighthouse Chart	1	180	NC	NC
0434	Champion HMCS	0	121	NC	NC
0435	Murdoch Middle Charter	1	239	NC	NC
0437	City On A Hill Charter	1	236	NC	NC
0438	Codman Academy Ch	0	105	NC	NC
0439	Conservatory Lab Charter	0	135	NC	NC
0440	Community Day Charter Sch	1	306	NC	NC

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0441	Sabis International	0	1,374	NC	NC
0442	Frederick Douglass CS	0	349	NC	NC
0444	Neighborhood House Chart	0	242	NC	NC
0445	Abby Kelley Foster Reg Ch	2	1,087	NC	NC
0446	Sabis Foxboro Reg'l Chart	5	981	51	(6, 96)
0447	Benjamin Franklin Charter	1	400	NC	NC
0449	S.Boston Harbor Acad Ch	2	360	NC	NC
0450	Hilltown Charter School	1	146	NC	NC
0451	Robert M. Hughes Charter	0	180	NC	NC
0452	Health Careers Acad HMCS	0	199	NC	NC
0454	Lawrence Family Dev Chart	0	520	NC	NC
0455	Hill View Montessori CS	0	122	NC	NC
0456	Lowell Community Charter	0	629	NC	NC
0458	Lowell Middlesex Acad Ch	0	100	NC	NC
0464	Marblehead Community Ch	2	220	NC	NC
0466	Martha's Vineyard Charter	1	162	NC	NC
0469	Media & Tech Charter	0	186	NC	NC
0470	Mystic Valley Adv Reg Ch	2	1,098	NC	NC
0471	New Leadership HMCS	0	396	NC	NC
0472	New Bedford Global Learni	1	279	NC	NC
0474	North Central Charter Ess	0	334	NC	NC
0478	Francis W Parker Charter	0	368	NC	NC
0479	Pioneer Valley Perf Arts	2	402	NC	NC
0481	Boston Renaissance Ch Sch	0	1,430	NC	NC
0482	River Valley Charter	3	287	NC	NC
0483	Rising Tide Charter Sch	5	253	198	(26, 369)
0484	Roxbury Prep Charter	0	190	NC	NC
0485	Salem Academy Charter	1	87	NC	NC
0486	Seven Hills Charter Sch	0	667	NC	NC
0487	Somerville Charter School	0	731	NC	NC
0488	South Shore Charter Sch	3	468	NC	NC
0489	Sturgis Charter School	1	357	NC	NC
0490	Uphams Corner CS	0	147	NC	NC
0491	Atlantis Charter School	0	700	NC	NC
0600	Acton Boxborough	7	2,691	26	(7, 45)
0603	Adams-Cheshire	9	1,790	50	(18, 83)
0605	Amherst-Pelham	19	1,963	97	(53, 140)
0610	Ashburnham-Westminster	13	2,436	53	(24, 82)
0615	Athol-Royalston	10	2,161	46	(18, 75)
0618	Berkshire Hills	11	1,391	79	(33, 126)
0620	Berlin-Boylston	2	470	NC	NC
0622	Blackstone-Millville	4	2,278	NC	NC
0625	Bridgewater-Raynham	30	6,064	49	(32, 67)
0632	Chesterfield-Goshen	1	171	NC	NC
0635	Central Berkshire	5	2,211	23	(3, 42)

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0640	Concord-Carlisle	4	1,297	NC	NC
0645	Dennis-Yarmouth	21	4,115	51	(29, 73)
0650	Dighton-Rehoboth	29	3,398	85	(54, 116)
0655	Dover-Sherborn	0	1,058	NC	NC
0658	Dudley-Charlton Reg	24	4,408	54	(33, 76)
0660	Nauset	4	1,802	NC	NC
0662	Farmington River Reg	1	191	NC	NC
0665	Freetown-Lakeville	5	1,873	27	(3, 50)
0670	Frontier	5	748	67	(8, 125)
0672	Gateway	6	1,387	43	(9, 78)
0673	Groton-Dunstable	18	2,927	61	(33, 90)
0674	Gill-Montague	8	1,245	64	(20, 109)
0675	Hamilton-Wenham	6	2,236	27	(5, 48)
0680	Hampden-Wilbraham	12	3,910	31	(13, 48)
0683	Hampshire	3	874	NC	NC
0685	Hawlemont	0	137	NC	NC
0690	King Philip	11	2,028	54	(22, 86)
0695	Lincoln-Sudbury	1	1,512	NC	NC
0698	Manchester Essex Regional	11	1,284	86	(35, 136)
0700	Martha's Vineyard	3	815	NC	NC
0705	Masconomet	8	2,109	38	(12, 64)
0710	Mendon-Upton	25	2,759	91	(55, 126)
0715	Mount Greylock	1	732	NC	NC
0717	Mohawk Trail	8	1,437	56	(17, 94)
0720	Narragansett	6	1,697	35	(7, 64)
0725	Nashoba	18	3,142	57	(31, 84)
0728	New Salem-Wendell	1	156	NC	NC
0730	Northboro-Southboro	7	1,280	55	(14, 95)
0735	North Middlesex	36	4,688	77	(52, 102)
0740	Old Rochester	7	1,239	56	(15, 98)
0745	Pentucket	14	3,466	40	(19, 62)
0750	Pioneer Valley	2	1,107	NC	NC
0753	Quabbin	5	3,323	15	(2, 28)
0755	Ralph C Mahar	3	726	NC	NC
0760	Silver Lake	3	1,848	NC	NC
0765	Southern Berkshire	3	979	NC	NC
0766	Southwick-Tolland	9	1,925	47	(16, 77)
0767	Spencer-E Brookfield	7	2,287	31	(8, 53)
0770	Tantasqua	8	1,824	44	(14, 74)
0773	Triton	18	3,510	51	(28, 75)
0774	Up-Island Regional	1	382	NC	NC
0775	Wachusett	42	7,060	59	(42, 77)
0778	Quaboag Regional	5	1,500	33	(4, 63)
0780	Whitman-Hanson	21	4,527	46	(27, 66)
0801	Assabet Valley	0	907	NC	NC

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0805	Blackstone Valley Regional	1	850	NC	NC
0806	Blue Hills Voc	0	780	NC	NC
0810	Bristol-Plymouth Voc Tech	0	1,000	NC	NC
0815	Cape Cod Region Voc Tech	1	717	NC	NC
0818	Franklin County	0	529	NC	NC
0821	Greater Fall River	1	1,266	NC	NC
0823	Greater Lawrence RVT	1	1,507	NC	NC
0825	Greater New Bedford	0	1,906	NC	NC
0828	Greater Lowell Voc Tech	11	1,949	56	(23, 90)
0829	So Middlesex Voc Tech Reg	3	744	NC	NC
0830	Minute Man Voc Tech	1	727	NC	NC
0832	Montachusett Voc Tech Reg	4	1,229	NC	NC
0851	Northern Berkshire Voc	1	469	NC	NC
0852	Nashoba Valley Tech	1	545	NC	NC
0853	Northeast Metro Voc	1	1,213	NC	NC
0854	North Shore Reg Voc	0	455	NC	NC
0855	Old Colony Reg Voc Tech	3	547	NC	NC
0860	Pathfinder Voc Tech	2	668	NC	NC
0871	Shawsheen Valley Voc Tech	4	1,228	NC	NC
0872	Southeastern Reg Voc Tech	3	1,197	NC	NC
0873	South Shore Reg Voc Tech	2	572	NC	NC
0876	Southern Worcester City VT	0	1,021	NC	NC
0878	Tri County	1	857	NC	NC
0879	Upper Cape Cod Voc Tech	0	643	NC	NC
0885	Whittier Voc	5	1,255	40	(5, 75)
0910	Bristol County Agr	0	426	NC	NC
0913	Essex Agr Tech	0	425	NC	NC
0915	Norfolk County Agr	0	434	NC	NC