The Impact of Special Education Reform:
A Case Study of Massachusetts

Massachusetts Association of School Superintendents

Sheldon H. Berman
Perry Davis
Ann Koufman-Frederick
David Urion

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THE IMPACT OF SPECIAL EDUCATION ON EDUCATION REFORM: A CASE STUDY OF MASSACHUSETTS

EXECUTIVE SUMMARY

For the past five years, the Massachusetts Association of School Superintendents has been studying the impact on school districts of the increasing cost of special education. After examining special education cost and enrollment data nationally and in Massachusetts, this study concludes that the increase in special education cost is not due to district policy and practice and will not be solved by legislating changes in these practices. Instead it is due to such medical, economic, and social factors as:

- advances in medical knowledge and technology,
- deinstitutionalization of special needs children,
- the consequences of a higher percentage of children living in poverty, and
- increases in families experiencing social and economic stress.

Due to these factors, more children with more severe special needs are entering public schools. The increasing numbers of more severely disabled children require the allocation of additional resources to educate and care for these students. The state and the federal government need to recognize the reality of these increases and provide relief to districts.

Complicating the financial issues facing districts are significant increases in the number of children and the severity of disability of children served by Early Intervention programs serving 0 to 3 year olds and special needs preschool programs serving 3 to 5 year olds. These increases lead us to believe that costs will continue to increase in the future. Therefore, the urgency for reform in special education finance is more pressing than ever.

FINDINGS

The MASS study analyzed both national and Massachusetts special education enrollment and cost data over the last ten years. Because of the lack of national cost data and the high quality of Massachusetts enrollment and cost data, Massachusetts serves as a particularly good case study for examining what may be happening nationally. Our study found that:

- The percent of students enrolled in special education in Massachusetts declined from 17.4% in 1992 to 16.7% in 2000. In fact, special education enrollment growth in Massachusetts was lower than the growth in overall enrollment.

- In spite of declines in the percentage of students enrolled in special education, the cost of special education has continued to increase at a significantly greater rate than that of regular education. As a result, special education now consumes a significantly higher percentage of most school districts' budgets. In 1990, 17.19% of school department expenditures were allocated to special education statewide.

By 2000 this rose to 19.54%. In contrast, expenditures for regular education as a percent of total district expenditures declined from 52.3% to 48.6%.

- In percentage terms, special education expenditures grew by 53.5% between 1990 and 2000, increasing at almost twice the rate of regular education expenditures which grew by 33.7%. However, the difference is even more significant when adjusted for inflation. In 1990 dollars, per pupil regular education expenditures grew by only $186 or 4.5%, while per pupil special education expenditures grew by $1,336 or 20%.

- The increasing costs are also apparent in per pupil expenditure trends and reflect the growth in severity of disabilities school districts are addressing. Between FY90 and FY99 per pupil expenditures in special education increased by $3,574 from $6,675 to $10,249. Regular education expenditures increased by $1,384, from $4,103 to $5,487, or only approximately one-third as much as special education.

- In contrast to the decline in the percent of students enrolled in special education, there have been dramatic increases in the number of children and the severity of disability of children served by Early Intervention and special needs preschool programs. In 1992, 9,809 children were served by Early Intervention in Massachusetts, with 59% of these children considered to have moderate or severe delays. By 1999, the number of children being served had increased by 105% to 20,075. However, in 1999 the percent of these children with moderate or severe delays had increased to 86%. Therefore the number of children with moderate to severe delays close to tripled during those years, from 5,818 to 17,290. A similar trend is evident in special education preschool enrollment. Between 1989 and 2000, special education preschool enrollments in Massachusetts rose by 83.8%, while other special education enrollments increased by only 13.1% and total enrollment by 17.8%. The Early Intervention and preschool trends observed in Massachusetts are paralleled nationally. These increases indicate that costs will continue to increase in the future and the trend in enrollment in Massachusetts may change as well.

- The increases in early childhood special education enrollments may already be driving rapid increases in special education enrollment nationally. Between the 1988-89 and the 1997-98 school years, national preschool enrollment grew by 58.5% while special education enrollment for students ages 6 to 21 grew by only 29.4%.

- The increases in severity in the special education population and the increases in cost may be due primarily to advances in medical technology. Over the last twenty years medical advances have enabled many children with disabilities to survive who would not have done so in the past. Many others are now to attend school rather than being cared for in institutional settings. Due to these advances, survival of children at a birth weight of less than 3.3 pounds has increased from 52% twenty years ago to 73% ten years ago to 90% today. Multiple studies have shown a close correlation between prematurity/low birth weight and subsequent developmental disorders. The actual number of children with disabilities resulting from prematurity, therefore, has increased markedly over the past twenty years. Medical advances have also impacted children who are born asphyxiated and children with epilepsy,

autism, and numerous other disabilities so that these students are capable of attending public schools.

- The research necessary to implement effective treatments to prevent the disabilities associated with prematurity, birth asphyxia, epilepsy, and autism is only now in its very earliest stages. As a result, the number of students with these disorders attending schools and requiring extensive services is likely to continue to climb for at least the first two decades of this century.

- Increases in other risk factors-- children living in poverty, children who have been maltreated, and children removed from the home and placed in foster care--have also resulted in increases in the children requiring special education services.

- The financial challenges facing Massachusetts districts as a result of rising special education costs are exacerbated by a foundation funding formula that seriously underrepresents the costs of serving special education students. Not only does the formula set unrealistically low percentages for students in special education, but it allocates less than half of what is required to pay for services for these students.

- The increases in special education costs have had a dramatic impact on the ability of districts to meet the goals of education reform and improve regular education programs. The increases in special education costs for 29% of Massachusetts school districts exceeded all new state aid resulting from Massachusetts Education Reform Act between 1993 and 1999. For 56% of districts, the increases in special education costs were equivalent to over 50% of all new aid. As a result, special education has consumed a disproportionate share of new funds allocated to education.

CONCLUSION

The increase in seriousness of disabilities in the population in general *is currently requiring greater expenditures in special education and will continue to require increased expenditures in the future*. The solution to the financial crisis present for many school districts necessitates that the state and the federal government support school districts in meeting the increased costs of special education. On a federal level, the landmark Education for All Handicapped Children Act of 1975 (Public Law 94-142) established a federal commitment to pay for 40% of the excess cost of its special education mandate. This mandate has never been met and the federal government contributes a modest 7% of the costs of special education in Massachusetts. At a state level, Massachusetts' education reform finance formula seriously underestimates the actual cost of delivering special education services. As a result the primary financial responsibility rests on local communities that cannot afford to fund an education reform agenda in the face of rising special education costs.

We face a challenging dilemma. Children are entering our school systems with significantly greater special needs and these needs are often identified at a very early age. The increased cost for special education services is seriously compromising regular education programs and education reform in states throughout the country. We need a

solution that addresses the financial crisis emerging in many districts while at the same time meeting the real and substantial needs of these children. In addition, we need a solution that does not blame the children or those working with these children and does not pit regular education against special education.

The long-term solution lies in addressing the underlying causes of the special needs increases--the medical, social, and economic issues that cause children to require special education. We need to invest in medical research directed toward the prevention of disability in premature infants and we need to invest in reweaving the social and economic support systems for families.

However, if we are to pursue education reform nationally, we must pay immediate attention to the financial crisis presented by rising special education costs. To that end, we offer the following recommendations:

- The federal government must meet the commitment set in the initial legislation and provide 40% of the excess costs of special education.

- States must reexamine their funding formulas for special education to ensure that costs are not borne primarily by local school districts.

- In Massachusetts, the state must change both the special education components of the foundation formula and the new special education funding formula. The Massachusetts Association of School Superintendents recommends that the state share the financial responsibility for children with special needs so that when the cost of services exceeds three times the foundation budget, the state provides 90% of the additional costs.

- In addition, Massachusetts should consider fully funding special education transportation and services for state wards.

- Nationally, we must also bring special education into line with extant policy regarding early intervention, which allows for cost sharing of medically-derived expenses. The increased costs of special education have many factors that are intrinsically medical--nursing supervision, physical and occupational therapies, and adaptive equipment. Medical costs should be borne by medical providers, that is, the insurance companies and federal medical assistance for the impoverished, as occurs for these same children when enrolled in early intervention programs.

Action on these recommendations on the part of states and the federal government is imperative so that the needs of both regular education and special education children can be well served and the goals of education reform realized.

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Written By

Sheldon H. Berman, Ed.D.
Superintendent of Schools
Hudson, Massachusetts

Perry P. Davis, Ed.D.
Superintendent of Schools
Dover-Sherborn Regional School District
Dover, Massachusetts

Ann Koufman-Frederick, Ph.D.
Director of Technology Initiatives
Massachusetts Association of School Superintendents
Boston, Massachusetts

David K. Urion, M.D.
Clinical Child Neurologist and Director of the Learning Disabilities Program
Children's Hospital, Boston, MA

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INTRODUCTION

Over the past decade states across the nation have seen rapid increases in the number of children requiring special education services. They have also experienced significant increases in the cost to school districts for these services. In states where additional funding has been provided to support education reform and school improvement, the rising costs of special education have consumed a disproportionate share of these funds, thereby compromising school-based and state-based efforts to support reform.

However, the causes of these increases have been misdiagnosed as the result of district policy and practice. In a case study of cost increases in Massachusetts, we were able to determine that the increases schools were experiencing were not caused by school district policy and practice. In fact, just the opposite was the case. School district policy and practice was effective in containing and even reducing the percentage of children who required special education services in Massachusetts. However, costs in Massachusetts continued to increase. These cost increases were primarily due to the increased numbers of children with more significant special needs who require more costly services. As this paper will show the root causes of these increases were factors beyond the control of schools such as advances in medical technology, the deinstitutionalization of children with special needs and privatization of services, and such economic and social factors as the rise in the number of children in poverty and the number of families experiencing social and economic stress. Although the focus of this paper will be on Massachusetts, the national data on special education reveal that these factors may be influencing the increased number of special education children nationally.

THE NATIONAL CONTEXT

A Brief History

A national commitment to educating all children has been an American dream. However, before the enactment of the landmark Education for All Handicapped Children Act of 1975 (Public Law 94-142) a million children with disabilities were excluded from public schools, and more than half of the children with disabilities in the U.S. were not receiving appropriate educational services (Educational Research Service, 1999). This early federal legislation provided significant new substantive legal rights and procedural protections for handicapped children. It also established a federal commitment to pay for 40 percent of the excess cost of its special education mandate.

The 1975 Act did not include the concepts of "mainstreaming" or a "free and appropriate public education" (FAPE) but it established the groundwork for future legislation and special education policy for children with disabilities. In 1990, this Act was renamed the Individuals with Disabilities Education Act (IDEA), and the terminology

of "handicapped children" was changed to "children with disabilities." In 1997, Congress amended the IDEA to ensure that all children with disabilities would be provided a "free and appropriate public education." In 1999, Congress re-authorized IDEA, adding significant new amendments on eligibility, identification and evaluation of students, individualized education programs, appropriate placements, related services, procedural protections, discipline, and graduation and competency exams. Since 1975 special education law has developed into an increasingly complex system of federal and state statutes, regulations, and case law. This body of law has caused a substantial increase in the identification and the enrollment of children with disabilities (Wolman & Parrish 1996; Parrish, 1996). It has also increased the overall cost of special education, and shifted the pressure of funding special education to local school districts (Chambers et al, 1998; Parrish, 1996; Rothstein & Miles, 1995), creating concern among educational administrators across the country.

National Enrollment

For the past 21 years the Department of Education has collected data on the number of infants, toddlers, and preschoolers receiving special education services and the number of children ages 6 through 21 served under IDEA. The U.S. Department of Education's Office of Special Education Programs (OSEP) reports that in 1999 almost 5.5 million students with disabilities ages 6 to 21 were served by schools under the IDEA (Twenty-first Annual Report to Congress, 1999, Table II-2). The average increase across all age groups, six through 21 over the past 10 years was 29%. During this period, the annual data reported by states indicate that both the number of disability categories under which children receive services and the number of children receiving services have increased. A comparison of states on changes in the percent of children (3-21) served under IDEA (all disabilities) from 1987-1988 to 1998-1999 indicates that the average increase was 36.53%. The states in the top quartile ranged from Nevada with the highest at 120% and Florida at 77.74%, to New York with a 49.85% increase.

The 1999 Annual Report shows that each year in the last decade there was an increase in the numbers of infants, toddlers, and preschoolers with disabilities receiving special education services through the Early Intervention Program and the Preschool Grants Program. From 1988-1989 to 1997-1998 the cumulative percent increase in special education preschool enrollment for ages three through five was 58.50%. This was a significantly larger increase than the 30.22% increase in children age six and older served under IDEA (Table 1). The report suggests that continued growth of the special education preschool population reflects increased and more effective outreach at the State level, as well as continued improvement in reporting procedures (Twenty-first Annual Report to Congress, 1999, p. II-34). However, we believe that this growth also reflects medical, economic, and social factors that are producing actual increases in the number of children with disabilities and in the severity of those disabilities.

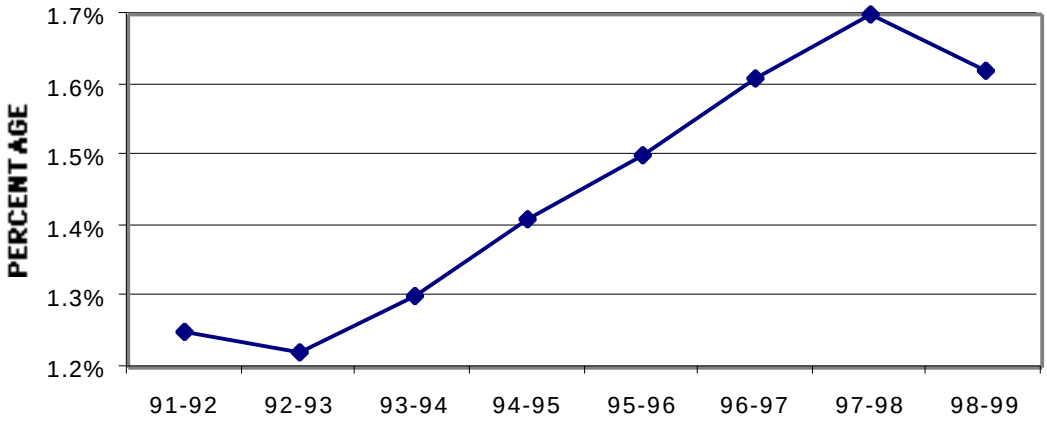
TABLE 1: NATIONAL SPECIAL EDUCATION AND SPECIAL EDUCATION PRESCHOOL ENROLLMENT 1989-1998

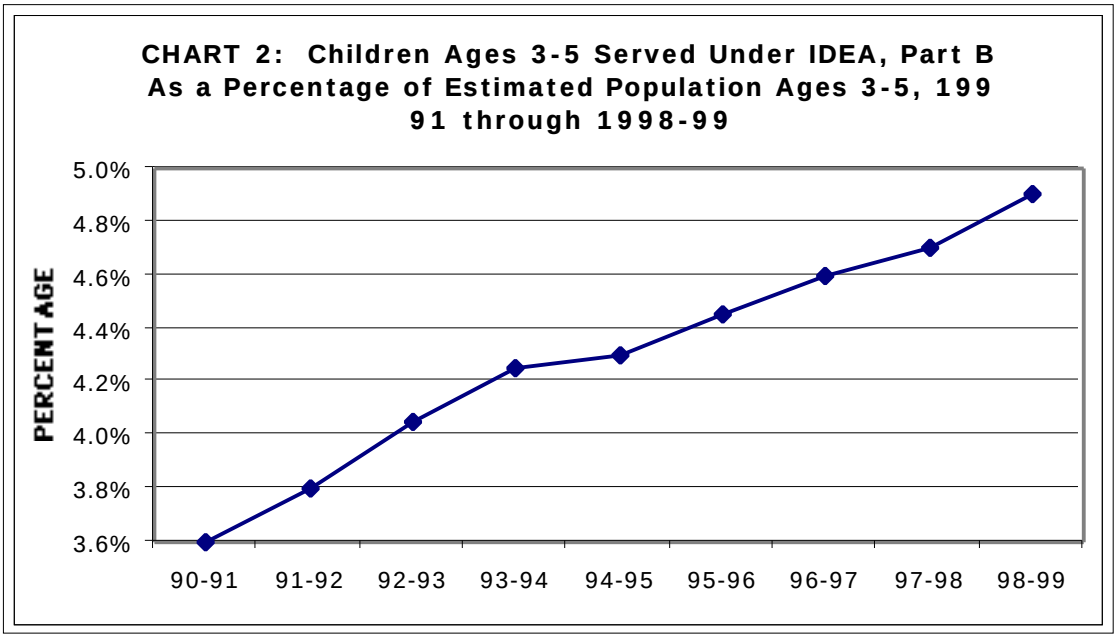
YEAR	AGES 3-5			AGES 6-21		
	ENROLLMENT	*% INCREASE*	*CUMULATIVE % INCREASE*	*ENROLLMENT*	*% INCREASE*	*CUMULATIVE % INCREASE*
1988-89	360,281			4,173,512		
1989-90	385,587	7.02%	7.02%	4,253,018	1.91%	1.91%
1990-91	394,766	2.38%	9.57%	4,361,751	2.56%	4.51%
1991-92	420,403	6.49%	16.69%	4,499,824	3.17%	7.82%
1992-93	455,449	8.34%	26.41%	4,625,574	2.79%	10.83%
1993-94	491,685	7.96%	36.47%	4,779,359	3.32%	14.52%
1994-95	522,709	6.31%	45.08%	4,907,511	2.68%	17.59%
1995-96	548,593	4.95%	52.27%	5,078,951	3.49%	21.69%
1996-97	557,152	1.56%	54.64%	5,230,740	2.99%	25.33%
1997-98	571,049	2.49%	58.50%	5,401,292	3.26%	29.42%

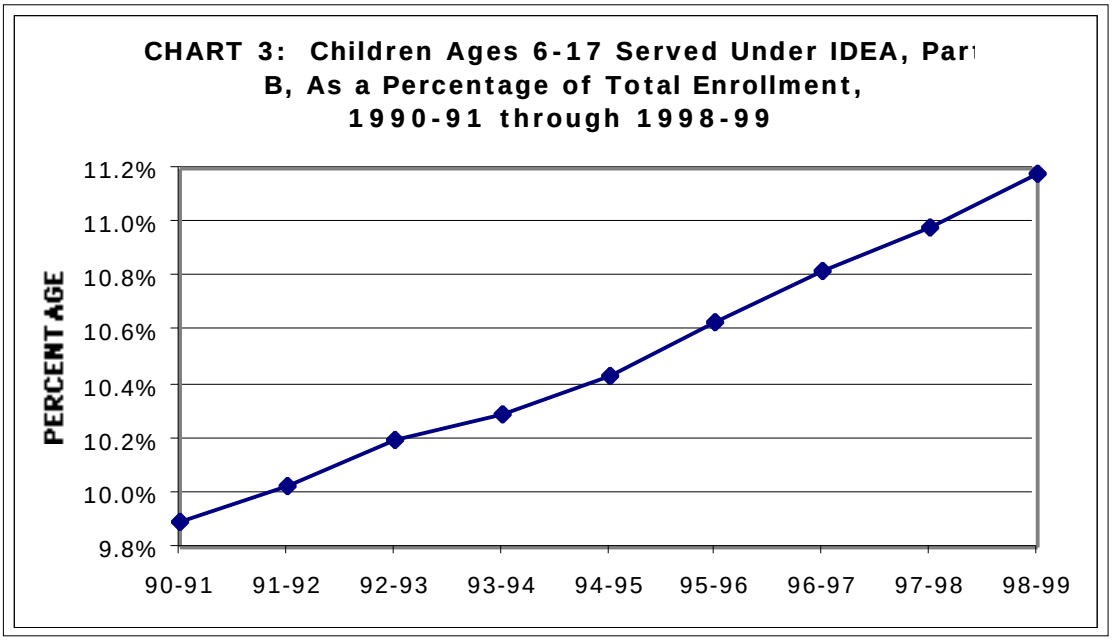
Source: 21st Annual Report to Congress 1999, U.S. DOE

The 1999 Annual Report concludes that the number of students with disabilities served under IDEA continues to increase at a rate higher than both the general population and school enrollment (Twenty-first Annual Report to Congress, 1999, p. II-44). Based on estimated enrollment (prek-K12) for 1990-1991 through 1998-1999 the percentage of children being served under preschool special education services and IDEA has increased faster than increases in regular education. There have been increases at all levels, among children 0 to 2 years old, 3 to 5 years old, and 6 to 17 year olds. The greatest percent increase has occurred among children ages 3 to 5, with a 1.4% increase. Increases for children 0 to 2 were .4%, and increases for school age children were 1.29% (Westat & OSEP, 2000)(Charts 1, 2, and 3).

CHART 1: Infants and Toddlers Ages 0-2 Receiving Early Intervention Services As a Percentage of the Estimated Population Ages 0-2, 1991 to 1998







The National Center for Education Statistics confirms the data reported in the Annual Report and those developed by Westat. NCES reports that from 1988 to 1999 public school enrollment for grades 1through 12 increased by 17%, reaching 43 million in 1999. Enrollment is projected to increase through the first half of this decade to an all time high of 44.4million students in 2006 (NCES, tables 3-1,3-2). Enrollment trends calculated by the National Center for Education Statistics also show that the numbers and proportions of children being served in programs for the disabled increased over the last decade (NCES, 1999).

The Center for Special Education Finance reports that "special education enrollment has experienced continual growth in numbers and as a percentage of total school enrollment since the implementation of IDEA. It is, therefore, not surprising that special education expenditures have also continually risen and that based on various estimates, it appears that per pupil expenditures for special education are growing faster than for general education" (Chambers et al, 1998; Rothstein & Miles, 1995).

National Expenditures on Special Education

Since the 1975 special education mandates, special education expenditures have been shared among federal and state governments, and local school districts. In 1988, the federal government eliminated the requirement that states provide information on special education expenditures. Therefore, it is difficult to answer the tough questions about how much is being spent on special education at the state and local levels. When IDEA was originally enacted, and re-authorized in 1997, the federal government made a commitment to pay 40 percent of the excess cost of its special education mandate. The Center for Education Finance reports that over the years since 1975, the federal appropriations have ranged from seven percent to twelve percent of the total excess cost. The national average for federal, state and local expenditures for FY94, the last year for which the Center has data, was 7% federal, 53% state and 40% local. This data is based on research conducted by the Decision Resources Corporation for the 1985-1986 school year (Center for Education Finance, 1994).

The best estimates of what is currently spent on special education across the nation range from $30.9 billion to about $34.8 billion (Education Finance Statistics Center, nces.ed.gov/edfin). Although national expenditures on special education are not really known, various calculations (e.g. Parrish, 1996; Rothstein & Miles, 1995) support that these expenditures are rising at a faster rate than for public education as a whole (Wolman & Parrish, 1996). Research by the U.S. Department of Education concludes that special education costs for individual children with disabilities is 2.28 times the average regular education expenditure in any state (Moore et al, 1988). The national average of state special education expenditures as a percent of total K to 12 expenditures was 12.2% (State Special Education Finance Systems, 1994-1995, Table 2-8). The range of expenditure for special education for the top quartile of states ran from 13.4% for Minnesota to 21.2% for Illinois. Therefore, these states were spending considerably more per pupil on special education than the national average.

Updated and more accurate special education expenditure information and its relationship to general education is critical. There are no more recent, comprehensive, and accurate data sources than the research conducted by the Decision Resources Corporation for the 1985-1986 school year. Since this information has important policy implications, over the next four years the U.S. Department of Education's Office of Special Education Programs (OSEP) is funding the Special Education Expenditure Project (SEEP, www.seep.org/seep). SEEP research will investigate the average expenditures across states, districts, schools and students. Several of the research questions involve understanding the factors that affect decisions about resource allocation. The project will address expenditure issues relating to inclusion, consolidation, and assessment, with an emphasis on the relationship between general education and special education. Beginning December 2001 expenditure data from SEEP will be available.

In the interim, special education enrollment and spending in Massachusetts can serve as a case study in the causes of the increased enrollment and expenditures in special education.

A CASE STUDY: MASSACHUSETTS

In the spring of 1996, the Massachusetts Association of School Superintendents (MASS) established a task force to study rapidly increasing special education costs across the state. These cost increases were significantly impacting school districts' ability to implement the state's education reform program. The Association published a study in 1997 reporting its findings. This study was then updated with new data in 1999 and 2000, and again for this paper.

The study found that the increase in special education costs had not been a result of school district policy and practice. Instead it had been due to such medical, economic, and social factors as the advances in medical knowledge and technology, the deinstitutionalization of special needs children, the consequences of a higher percentage of children living in poverty, and the increase in families experiencing social and economic stress. Due to these factors, more children with more severe special needs were entering public schools.

In addition, we found that the financial challenges facing districts as a result of rising special education costs were exacerbated by Massachusetts' new education reform funding formula. This formula was built on the inaccurate assumption that school district policy and practice were responsible for the cost increases and the state could force school districts to change their practices by under-representing the costs of serving special education students in the formula. Not only did the formula set unrealistically low percentages for students in special education, but allocated less than half of what would be required to pay for services for these students.

Finally, we found that increases in the number of children and the severity of disability of children served by Early Intervention programs serving 0 to 3 year olds and special needs preschool programs serving 3 to 5 year olds indicated that costs would continue to increase in the future.

Special Education Services in Massachusetts

Massachusetts has 350 separate school districts. The vast majority are town-based and serve students within a particular town. A second group of school districts are regional districts that serve two or more towns. These tend to be in rural or suburban areas of the state. Only three school districts--Boston, Worcester and Springfield--serve more than fifteen thousand students. The median size of a Massachusetts school district is approximately two thousand students with only nine districts having enrollments that exceed ten thousand. The majority of school districts serve between one thousand and four thousand students.

The structure of Massachusetts' school districts has a direct impact on special education service delivery. Because of the small nature of most Massachusetts school

districts, it is difficult to provide specialized programs for children with significant disabilities within a district. In order to provide these services in an economically efficient way, school districts join legally approved collaboratives that provide these programs as a shared service among the participating districts. Virtually all local school districts in Massachusetts are members of a collaborative. However, the incidence of a particular disability may still not economically justify the creation of a collaborative program. In order to serve these low-incidence special needs students, students are placed in private special education schools either as a day placement in which the student returns home in the evening or as a residential placement. In general, the large cities have a sufficient student population to create special programs within their district, although they, too, place some students in collaborative and private programs.

The special education law in Massachusetts enables parents to request an alternate placement if they feel that their child is not being well served by a district or collaborative program. In these cases, parents often seek placements in private programs. In general, student placements within a district or through a collaborative are more cost-effective for a district than placement in a private setting.

There are two factors that have been important in determining a child's qualification for services and the nature of their program in Massachusetts. The first is the eligibility standard set for a student to qualify for special education services. The second is the standard by which the student is to be served. In September1992, the state implemented a new set of eligibility guidelines. Prior to 1992, schools placed children on an IEP using only the presence of a disability. Starting in 1992, schools were to use two criteria to determine eligibility: The presence of a disability and whether the child was making effective progress in regular education. These two standards were to be used by the TEAM to judge whether a disability was affecting the student's educational performance. In terms of standard of service, Massachusetts is one of two states that has had a standard higher than the Federal standard of "free and appropriate public education" (FAPE). This standard, usually referred to as "maximum feasible development," has existed since 1972. Due to legislation passed in July 2000, the standard will revert to the federal standard as of January 2002.

For state reporting purposes, special education placements are categorized into eight categories (see Appendix A). The first four categories represent classifications of students who are served within a school district. The fifth classification, known as a 502.5 classification or "private day placement," indicates students served in private settings that specialize in serving students with that disability. The sixth classification, 502.6 or "residential placement," indicates students served in private settings who requires 24-hour care. The seventh classification represents students who reside in hospital or home settings. School districts do not have responsibility for the costs of 502.7 placements. Finally, the eight classification, 502.8, indicates preschool children.

Almost all special education students are the financial responsibility of their local school district. For some private placements, the Department of Social Services shares the cost with the school district. Currently, the state pays 50% of the cost of all residential placements (502.6). The state also assumes responsibility for students in hospital settings and students who are incarcerated. In the early 1970's the state managed a number of institutional settings for children with disabilities. However, by

1995 all of these children were deinstitutionalized and put under the care of their local school district.

The financing formula for special education was changed in July 2000 and will go into effect for the 2002-2003 school year. In that formula, the state will assume a larger share of the financial responsibility for children with disabilities. Although the new funding formula provides for a modest increase in state resources, it is still far from the formula recommended by the Massachusetts Association of School Superintendents and many other groups working on special education reform in Massachusetts.

Data Collection

The MASS Special Education Task Force collected and reviewed Massachusetts Department of Education data on school expenditures and enrollments as well as data from the Department of Public Health, the Department of Social Services, and Educational Services in Institutional Settings. Massachusetts has had a comprehensive and consistent system of collecting data from each school district on school district finance as well as on enrollment. Each school district files an end-of-the-year report documenting expenditures by program and function. Each school district also reports enrollment data as of October 1 of each year and special education data as of December 1. All school districts are required to file these reports and they are entered into a computer database that was made available to the task force. In addition, we were also able to review data on child maltreatment, enrollment in Early Intervention programs for 0 to 3 year olds, and placement in foster homes.

The task force reviewed data on all school districts in the state. However, the analysis that follows does not include vocational-technical, trade, or agricultural schools. These districts usually draw from ten or more feeder districts and their special education expenditures are not comparable to other districts. First, the costs for students placed in collaborative, residential, or private day special education placements revert back to the district of residence. Second, these schools enroll a high percentage of special needs students in their vocational programs but do not specifically delineate costs as special education related. Therefore, the findings and recommendations reported are for the 300 city, town, and regional academic districts in the state.

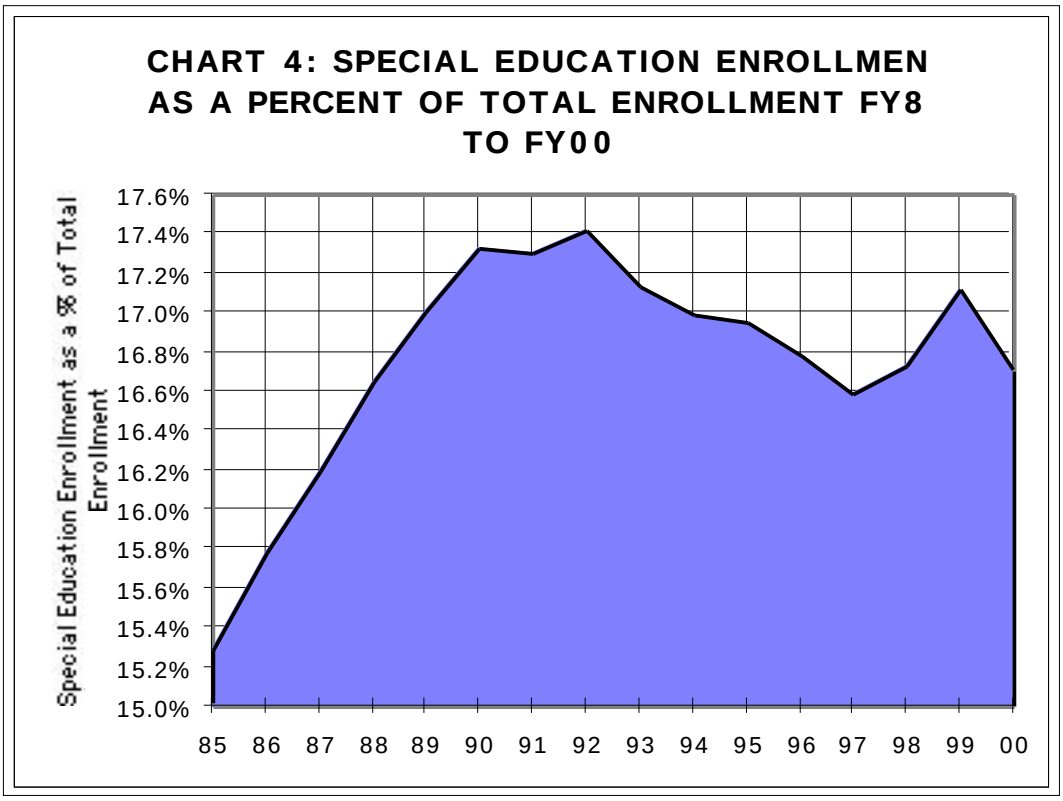
The Reality of Special Education Costs in Massachusetts

The special education components of the education reform funding formula, known as the foundation formula, were built on the assumptions that school districts did not effectively contain costs and that they identified more children than necessary as having special needs. Specific elements of the formula were designed as disincentives to these practices. For example, in all areas other than special education actual enrollment within a district is used to build the foundation budget. Additional allocations are provided for the actual number of students who are from low-income families or who are in bilingual or vocational programs. In contrast, allocations for special education are based on a preset percentage of children in special education set at a rate lower than the state average. In addition, the cost allocations for providing services to in-district preschool, in-district K to12 students, and out-of-district placements are set at levels well-below the actual costs districts experience for these students. These disincentives

were designed to cause districts to be more rigorous in their use of the eligibility standards and to encourage more cost-effective placement of students.

Our analysis of Massachusetts enrollment data shows that these assumptions are not accurate. In fact, schools have done a good job containing costs. They have rigorously applied eligibility standards and provided regular education and inclusive programming for children as alternatives to special education services.

Special education enrollments as a percent of total enrollment reached a high in FY92 of 17.4% (chart 4). At that time, new eligibility standards were fully implemented statewide. Beginning in FY93 and continuing through FY97 districts applied these new standards and enrollment declined to a low of 16.6%. With the exception of a spike in enrollment in FY99, special education enrollment has remained relatively steady at approximately 16.7%.



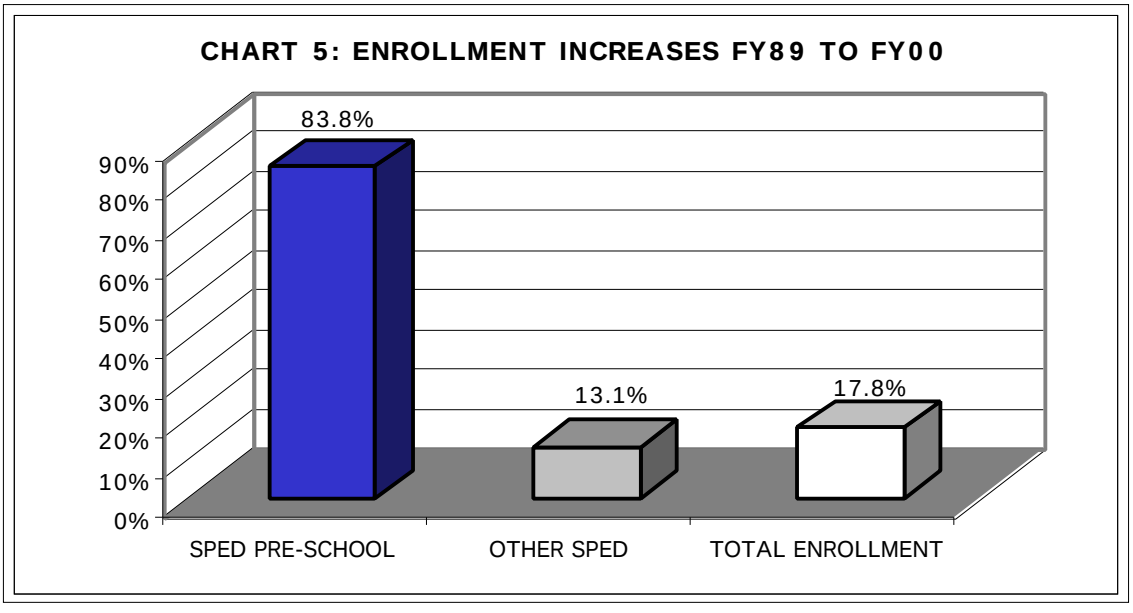
Massachusetts special education enrollment increases are also well below the national trends. Between FY89 and FY98, special education enrollment in Massachusetts grew at less than half the rate of growth nationally.

TABLE 2: NATIONAL AND MASSACHUSETTS SPECIAL EDUCATION ENROLLMENT 1989-1998

YEAR	NATIONAL			MASSACHUSETTS		
	ENROLLMENT	*% INCREASE*	*CUMULATIVE % INCREASE*	*ENROLLMENT*	*% INCREASE*	*CUMULATIVE % INCREASE*
1988-89	4,533,793			140,326		
1989-90	4,638,605	2.31%	2.31%	143,373	2.17%	2.17%
1990-91	4,756,517	2.54%	4.91%	144,707	0.93%	3.12%
1991-92	4,920,227	3.44%	8.52%	147,732	2.09%	5.28%
1992-93	5,081,023	3.27%	12.07%	147,727	0.00%	5.27%
1993-94	5,271,044	3.74%	16.26%	149,431	1.15%	6.49%
1994-95	5,430,220	3.02%	19.77%	151,843	1.61%	8.21%
1995-96	5,627,544	3.63%	24.12%	153,912	1.36%	9.68%
1996-97	5,787,892	2.85%	27.66%	155,128	0.79%	10.55%
1997-98	5,972,341	3.19%	31.73%	159,042	2.52%	13.34%

Source: 21st Annual Report to Congress 1999, U.S. DOE and Massachusetts DOE

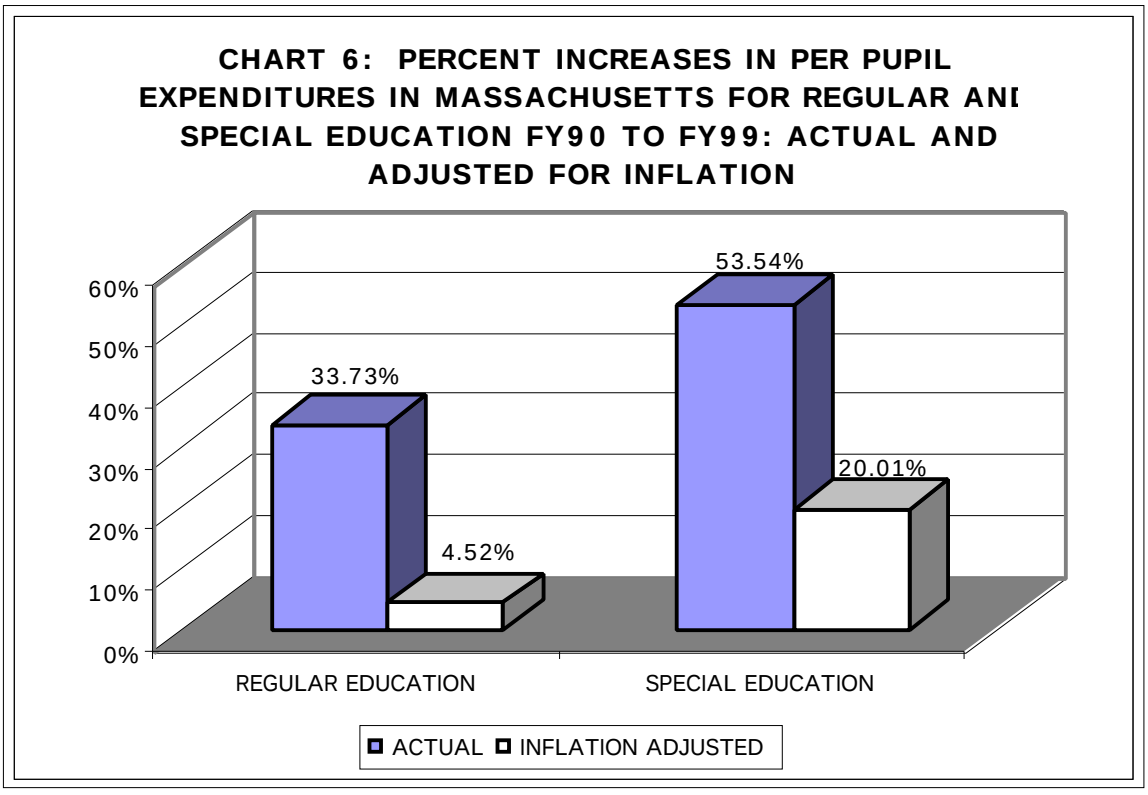
In our 1997 study we observed sharp increases in special education preschool enrollments and predicted that these would impact enrollments and costs in future years. In fact, current special education increases are driven by significant increases in preschool special education. Between FY89 and FY00, special education preschool enrollments in Massachusetts rose by 83.8%, while other special education enrollments increased by only 13.1% and total enrollment by 17.8% (chart 5). School districts continue to contain costs and to effectively apply the eligibility standards but are seriously pressed by a greater number of more seriously involved children entering school districts at age 3 diagnosed with a disability.



The sharp increases in preschool enrollments are reflected nationally; enrollments of children ages 3 to 5 are growing at twice the rate of growth for children ages 6 to 21 (Table 1).

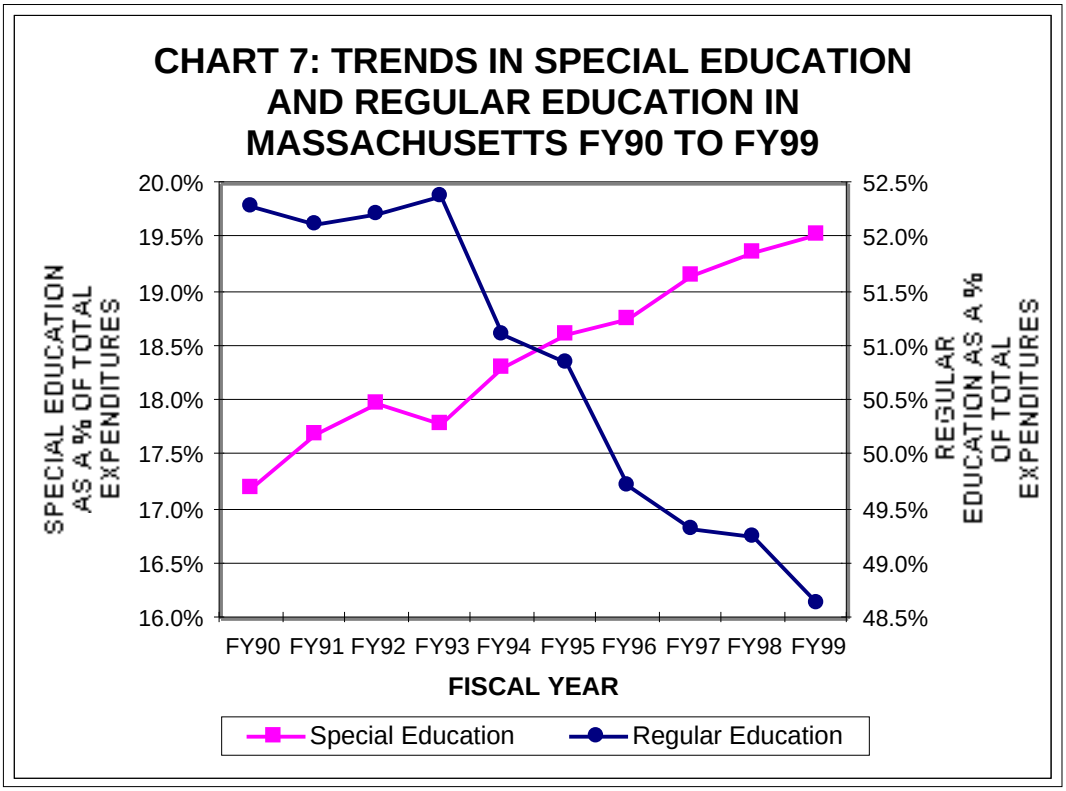
Costs continued to increase during this period as districts enrolled a greater number of children with more serious needs and increased spending in order to meet the needs of these students. We found that between FY90 and FY99 per pupil expenditures in special education increased by $3,574 from $6,675 to $10,249, while they increased by only approximately one-third as much, $1,384, in regular education, from $4,103 to $5,487. During this period, special education expenditures grew by 53.5%, increasing at almost twice the rate of regular education expenditures which grew by 33.7%. The difference is even more significant when adjusted for inflation. In 1990 dollars, per pupil regular education expenditures grew by only $186 or 4.5%, while per pupil special education expenditures grew by $1,336 or 20%.

The Education Reform Act of 1993 has resulted in the addition of $1.2 billion in state aid to local school districts. However, special education costs statewide increased by $476 million during those years, an equivalent of 38% of all the additional aid from 1993 to 1999.



The impact statewide of these increases has been dramatic. As a percent of total school expenditures, special education expenditures increased from 17.19% in FY90 to 19.54% in FY99 (chart 7). This represents almost $140,000,000 in additional expenditures for special education in just FY99. Special education has continued to

consume an ever larger percentage of school district budgets throughout the past decade, while expenditures on regular education as a percent of total expenditures declined from 52.3% to 48.6%.



Impact at a District Level

The majority of school districts in Massachusetts have experienced significant increases in special education costs. Between FY90 and FY99, expenditures for special education increased at a greater rate than expenditures for regular education in 88% of Massachusetts school districts. In only 1.3% of the districts was there a decline in special education expenditures between FY90 and FY99.

These increases have been particularly acute in approximately one-quarter of all districts. Between FY90 and FY99 seventy-eight districts, or 26% of the non-vocational districts, spent more than 30% of all new funds-- local as well as state--on increases in special education. Of these 60 spent between 30% and 40%, 12 spent between 40% and 50%, 5 spent between 50% and 75%, and 1 spent 80% of all new funds.

The impact on education reform is clear when one compares the additional state aid provided to communities for education reform and the additional special education expenditures in those communities. The increases in special education exceeded the amount received in new state aid between FY93 and FY99 for 88 of the 300 school districts. For 36 school districts special education increases were equivalent to between

75% and 99% of additional state aid. For another 44 school districts special education increases were equivalent to between 50% and 74% of new state aid. This means that 56% of Massachusetts' school districts expended the equivalent of 50% or more of new state aid on special education. There is no consistent pattern among these districts. They vary in size, wealth, and region.

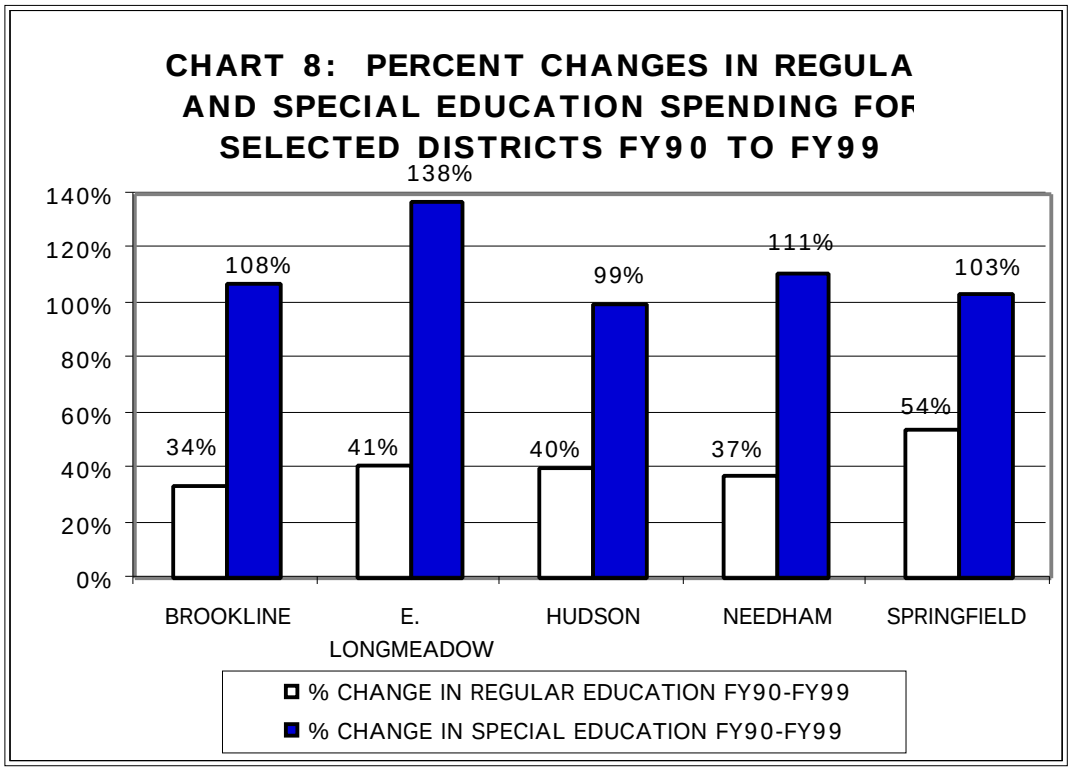
For example, Brookline is a suburb of Boston that has become highly urbanized. Median household income from the 1990 census was $45,598. Brookline enrolls almost 6,000 students pre-school to twelfth grade. Between FY90 and FY99, Brookline's total budget grew by 38%. Special education costs grew by 108% while regular education expenditures grew by 34%. The increased expenditures on special education represented 42% of all new dollars added to Brookline's budget, including additional local funds as well as additional state aid. In FY90, Brookline devoted 14.8% of its budget to special education. By FY99, the percentage had grown to 22.3%. Although education reform brought the district an additional $2,198,210 in aid between 1993 and 1999, the additional special education costs of $3,867,659 were almost double that amount. For Brookline, the additional state aid, meant primarily to help Brookline further education reform, simply offset a portion of the increased special education costs.

East Longmeadow is a rural community in Western Massachusetts with a student population of approximately 2,600 and a median family income of $41,372. Between FY90 and FY99, East Longmeadow experienced a 138% increase in special education costs, with the equivalent of 37% of all new funds going to special education. In contrast, regular education expenditures increased by only 41%. In FY90, special education represented 16.4% of East Longmeadow's total budget. By FY99, this had grown to 24.3%. As in Brookline, increases in the costs of special education between FY93 and FY99 exceeded all new aid to the district. East Longmeadow received $1,241,054 in new aid and experienced special education cost increases of $1,539,676.

Hudson is an industry-based community in Central Massachusetts. Median household income is $43,600 with a student population of approximately 2,800. Special education expenditures increased by 99.4% between FY90 and FY99 while regular education expenditures increased by 40.2%. The special education cost increases were equivalent to 32% of all new dollars added to Hudson's budget and special education expenditures increased from 13.9% of its budget to 19.4%. Special education cost increases almost matched all new education reform aid between FY93 and FY99. Hudson received $1,445,134 in new state aid but spent an additional $1,259,662 on special education during those years.

Needham is a middle income suburb on the outskirts of Boston with a median household income of $60,357 and a student population of approximately 4,300. Special education expenditures increased by 111% between FY90 and FY99 while regular education expenditures increased by only 37%. New special education expenditures were equivalent to 50.6% of all new funds, driving special education's percent of the total budget from 12% to 20%. As a wealthier suburb, Needham received less aid than more urban or poorer communities. Between FY93 and FY99 Needham received $1,525,975 in new aid, while its special education expenditures grew by $2,182,409.

Springfield is the third largest city in Massachusetts with a student population of almost 25,000 and a median household income of $25,656. Education reform in Massachusetts was designed to bring equity to school funding and Springfield, like many urban areas of the state, received a large percentage of new education reform aid. However, even with this new aid, special education cost increases had an impact. Between FY90 and FY99, special education expenditures grew at almost double the rate of regular education expenditures. Regular education grew by 54%. Special education expenditures increased by 103% and were equivalent to 28% of all new dollars invested in education in Springfield. This meant that Springfield was spending 25.8% of its budget on special education in FY99 in contrast to 23.6% in FY90. Springfield received $63,546,973 in new education reform aid between FY93 and FY99. Special education expenditures increased by $26,163,228, or 41% of the total new aid to Springfield.



An examination of the internal costs over time within a district reveals the extent to which districts have attempted to reduce costs by creating inclusive programs within the district. The Hudson Public Schools spends the largest portion of its budget on internal special education instructional services that include special education teachers, teacher assistants, nursing and psychological services, and such contracted services as physical therapy and occupational therapy. As a district of 2,800 students, the district cannot provide in-district programs for some students. Tuition and transportation costs for the twenty-eight students placed in out-of-district settings represented approximately 32% of the district's special education budget.

Hudson's effort to contain costs through in-district services is shown in chart 10. Expenditures on teacher assistants (special education aides) between FY94 and FY00 increased by 279%. Physical therapists and occupational therapists contracted by

CHART 9: SPECIAL EDUCATION EXPENDITURES BROKEN DOWN BY CATEGORY FOR THE HUDSON PUBLIC SCHOOLS FOR FY00

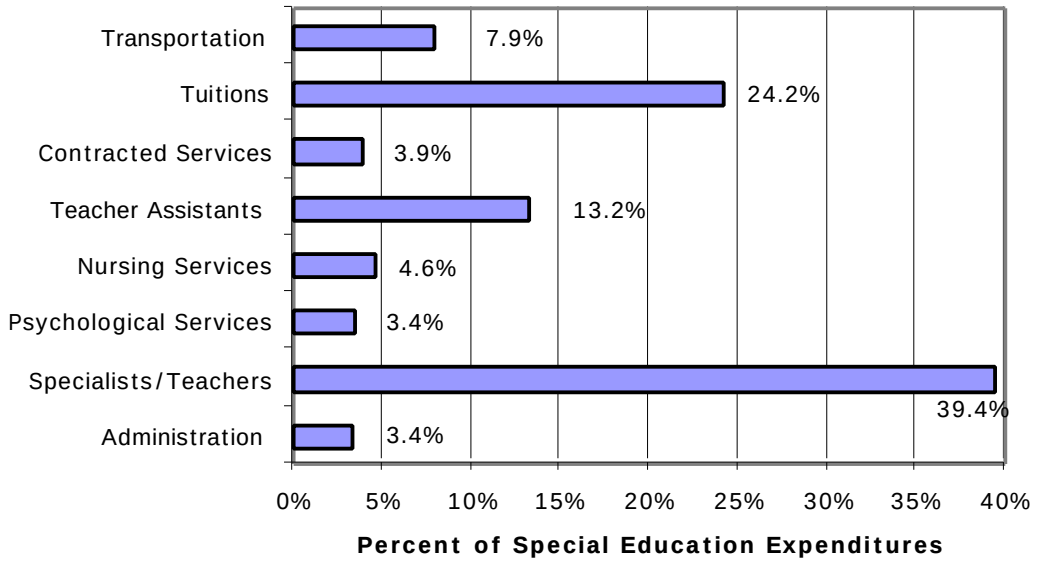
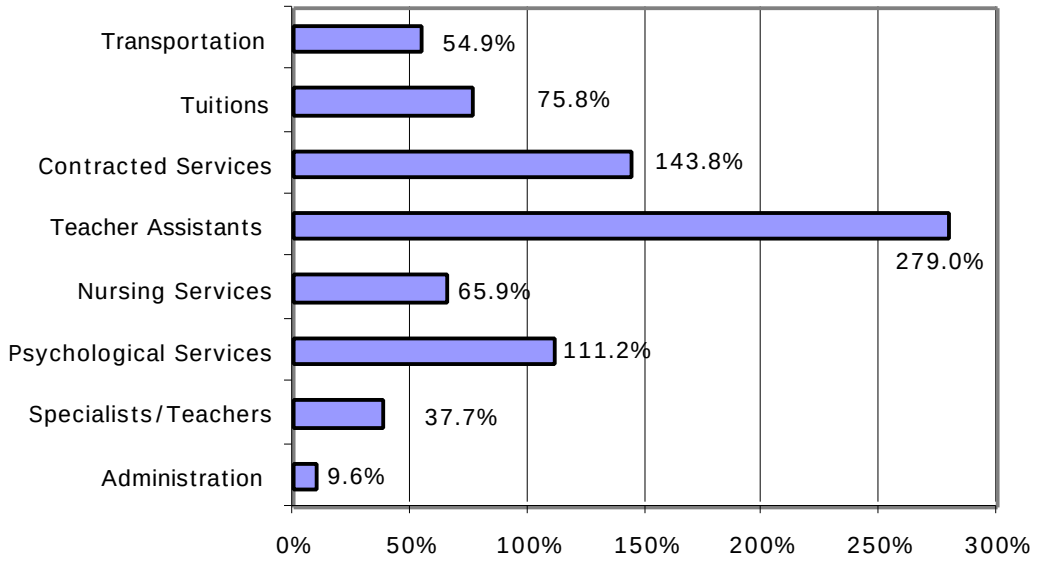
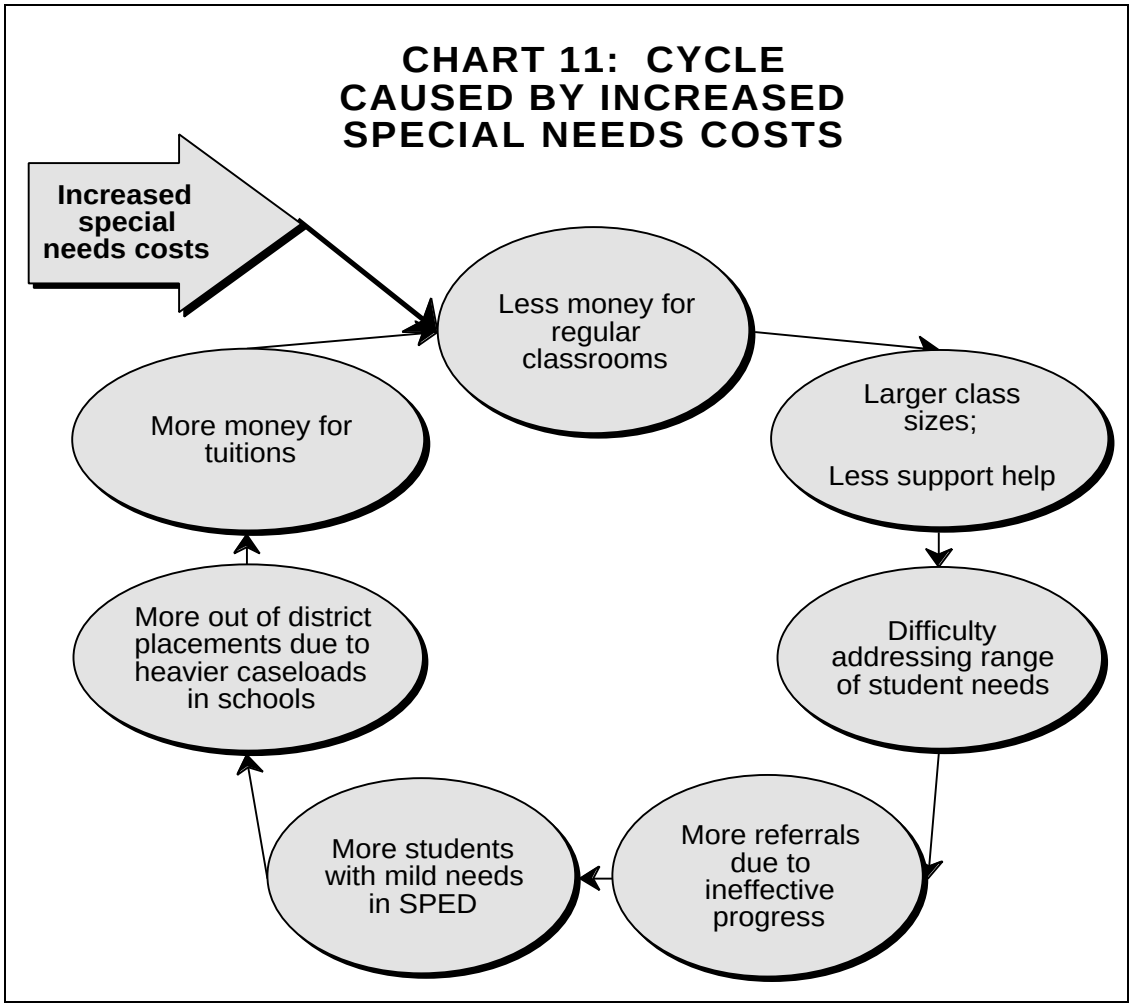


CHART 10: PERCENT INCREASE IN SPECIAL EDUCATION RELATED EXPENDITURES FY94 TO FY0 FOR THE HUDSON PUBLIC SCHOOLS



the district to serve students who would otherwise be in out-of-district placements increased 144%. The additional students served within the district also required additional psychological and nursing services. (The increase in nursing services is understated in this chart due to a grant subsidizing 30% of Hudson's nursing budget.) Although the number of out-of-district placements decreased from 45 to 28, the increased severity of the disability of these out-of-district placements resulted in tuition increases of 76% and transportation increases of 55%.

For most districts, the three primary causes of increased costs were students moving into the district with IEPs requiring private placement, increases in the number of preschool children requiring special education services, and increases in the number of foster placements within the community requiring significant special needs services. In fact, one factor in declining costs in some districts has been the movement of students with expensive private placements to another community. In all these districts compromises have been made to education reform initiatives due to the budget constraints presented by special education increases. Making headway on education reform is extremely difficult in the face of such increases in special education costs.



Given the limited funds available to districts, even those districts with smaller increases in special education expenditures have had their education reform efforts compromised by a disproportionate share of new funds allocated to special education. In fact, the data we have provided may understate the problem. Most of the increases in regular education expenditure have simply covered the cost of inflation.

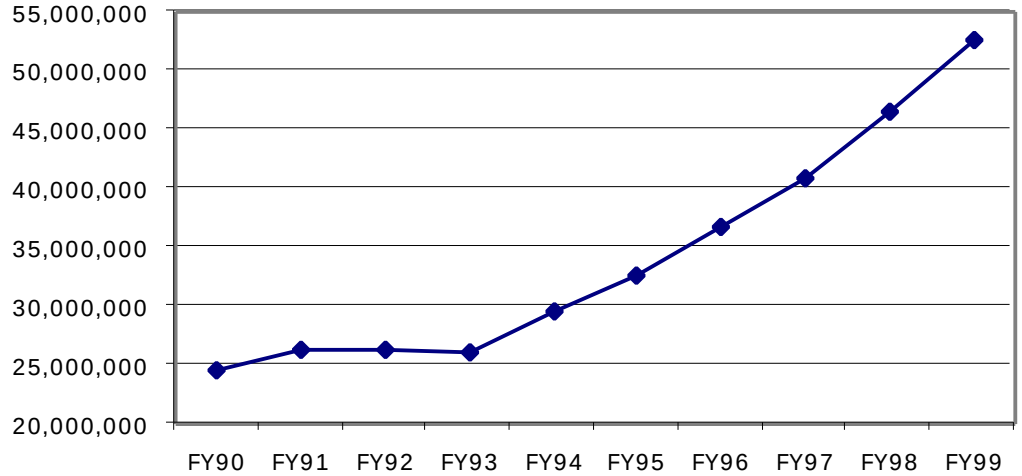
Significant increases in special education have the potential for starting a vicious cycle. Increases reduce the funds available for regular education classrooms causing increases in class size and reduction in support services. These in turn make it more difficult for teachers to address the range of student needs in the regular classroom, producing more referrals to special education. This increases costs again, perpetuating the cycle. For many Massachusetts districts, education reform funds have prevented the perpetuation of this cycle by providing the infusion of new funds to maintain regular education programs at a time of increasing special education costs. However, the price has been little improvement in regular education services for those districts--the original intent of the funding.

What is clear from our research is that special education now consumes a significantly higher percentage of most school districts' budgets and a disproportionate share of new funds allocated to education.

Associated Health Costs

Another cost trend impacting school districts is the increase in health and nursing expenditures. Over the past six years many school districts have experienced significant increases in the number of medically-involved students who require nursing and other health-related care. These children are not necessarily classified as special education students, although they often receive extensive services. Many are classified under "504" plans for which the Massachusetts Department of Education does not collect data. However, in analyzing the data on statewide health expenditures for school districts, we found that costs have increased by 114% between FY90 and FY99.

CHART 12: INCREASES IN SCHOOL DEPARTMENT HEALTH EXPENDITURES FOR MASSACHUSETTS FY90-99

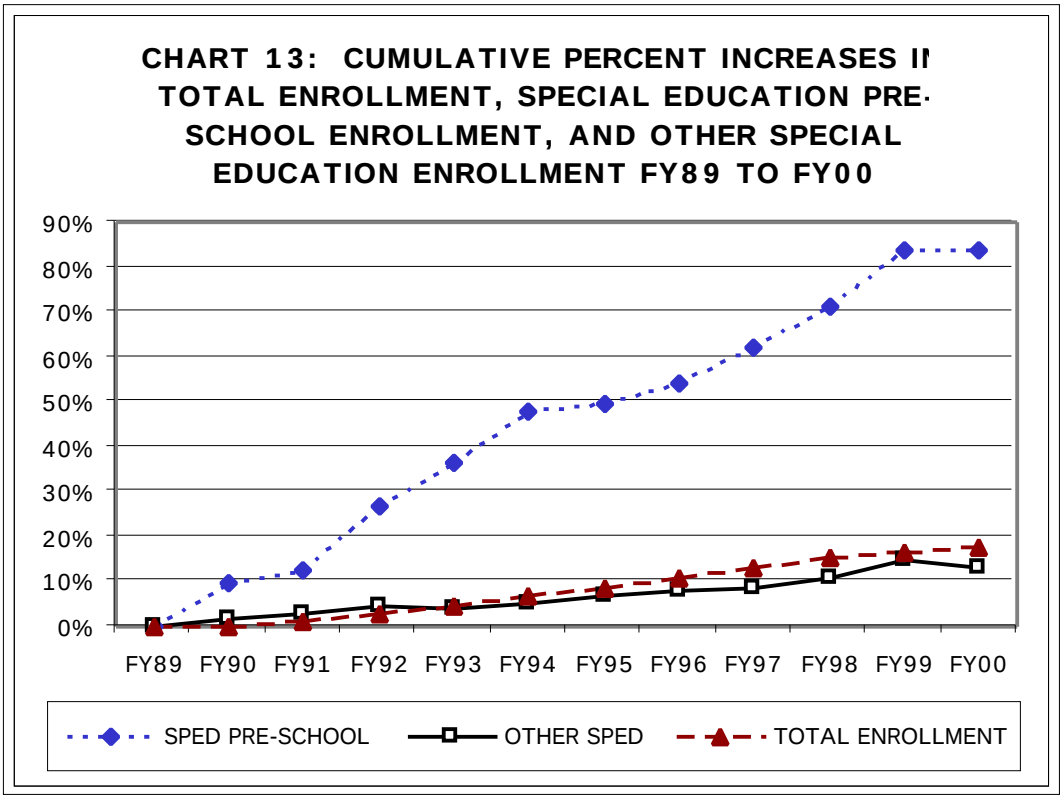


A portion of these costs pay for health educators but the remainder pays for nursing services. Health education costs funded through the state's Health Protection and Smoking Cessation grants are not included in these data. At this point, we have not been able to secure data on how much has been expended for health education versus nursing services. However, we believe that the primary driver of costs in this area is the increasing number of students needing medical attention. This was not anticipated when the foundation formula was developed and remains an area of serious underfunding in the formula.

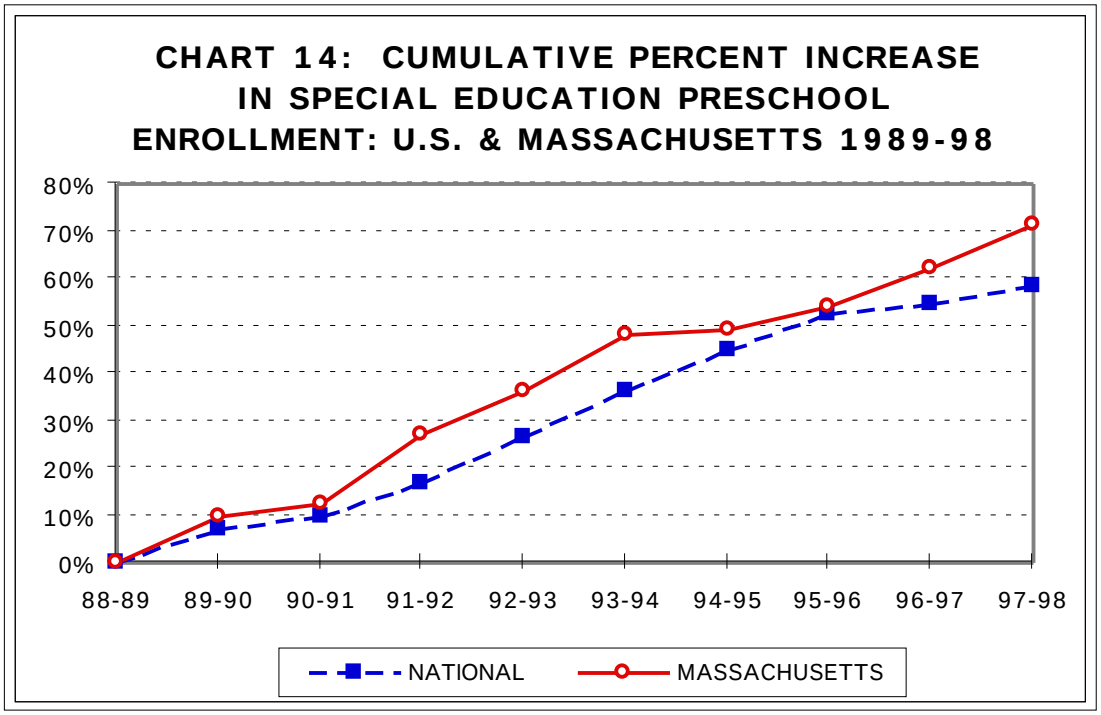
Medical and nursing-related costs could increase in the future, not only in Massachusetts but throughout the nation. On March 3, 1999, the U.S. Supreme Court announced its decision in Cedar Rapids Community School District v. Garret F. (119, S.Ct.992 U.S. 1999). The case involved a medically fragile student who had constant medical needs. In its decision, the Supreme Court clearly established the need for school districts to provide any and all necessary health services to qualified students with disabilities. The only services that school districts do not need to provide are those that only can be performed by a licensed physician. Katsiyannis and Yell (2000) discussed the implications of this case on the practice of special education in public schools, concluding that this decision would clearly mean higher costs for some school districts. The Supreme Court did acknowledge the issue of costs when it indicated that "the district may have legitimate financial concerns, but our role in this dispute is to interpret existing law, (our) concern was whether meaningful access to public schools will be assured" (Garret F., p. 4).

Ominous Trends

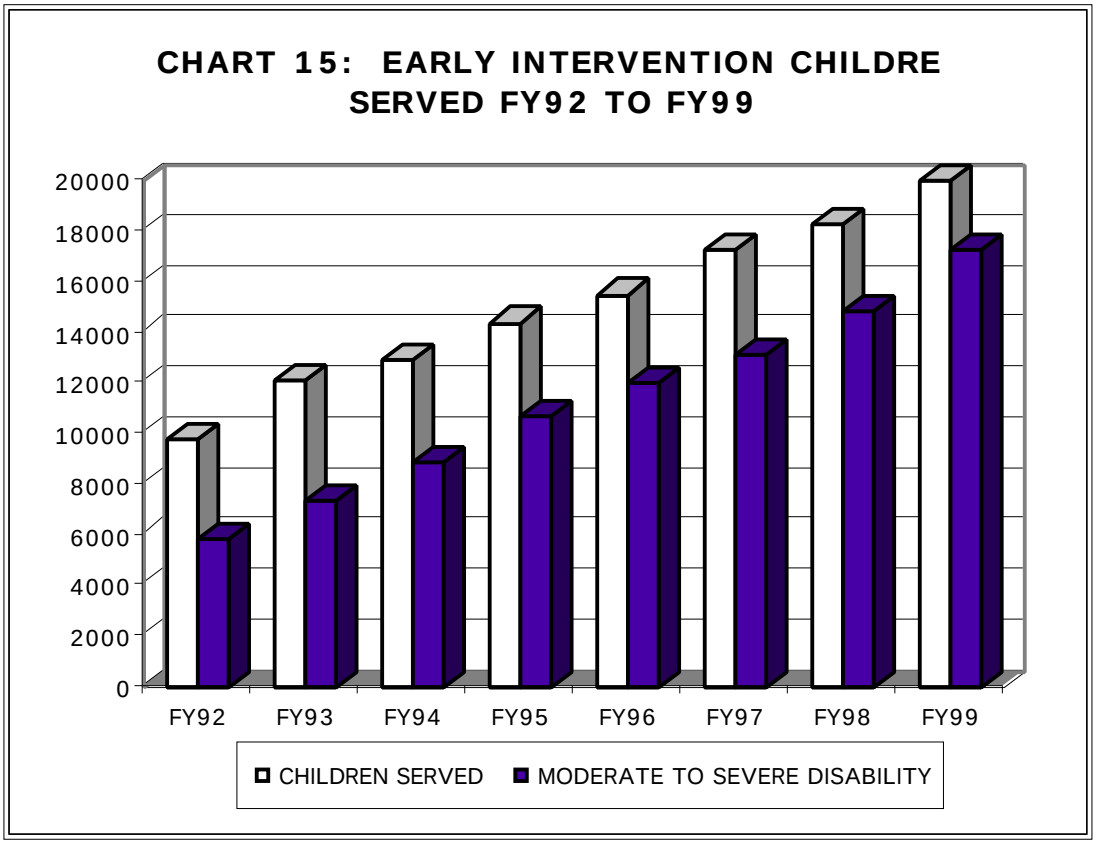
Based on increases in pre-school and Early Intervention enrollments as well as trends in medicine and social services, we believe that special education costs will continue to increase well into the future. A significant factor in the increase in costs over the past decade has been the rapid rise in the number of children with moderate and serious disabilities who require special needs preschool programs. Between FY89 and FY99 regular education enrollment rose by 17.8%. During this period special education enrollment in all categories excluding preschool rose by 13.1%. However, special education preschool enrollment increased by 83.8%.



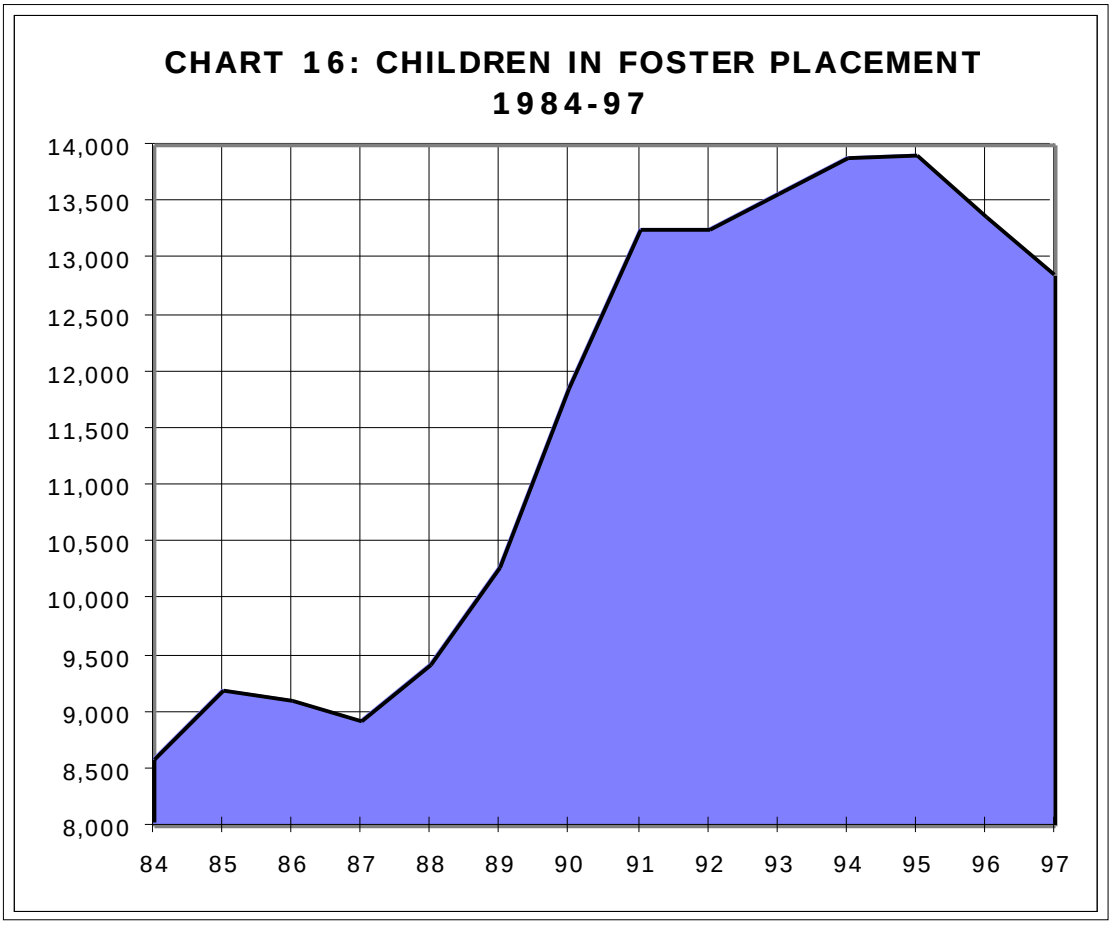
Preschool enrollment nationally has been growing at twice the rate of other special education enrollments. The increases in the Massachusetts preschool population parallel this trend.



Many districts reported to the MASS Special Education Task Force that not only were the number of children requiring special needs preschool programs continuing to increase but that these children had more significant disabilities. These reports are confirmed by data provided by the Department of Public Health on children in Early Intervention programs. In FY92, 9,809 children were served by Early Intervention with 59% of these children considered to have moderate or severe delays. By FY99, the number of children being served had increased by 105% to 20,075. However, the more ominous trend is that in FY99, the percent of these children with moderate or severe delays had increased to 86%. Therefore the number of children with moderate to severe delays close to tripled during those years, from 5,818 to 17,290.



There are other trends among young children that lead us to believe that we will soon see a burgeoning of special education costs as these children enter preschool and kindergarten to twelfth grade programs. For example, between FY84 and FY97, there was a 50% increase in the number of children placed in foster care by the Department of Social Services, increasing from 8,579 children to 13,877 in 1994 and then declining to 12,850 in 1997. However, the decline in 1996 and 1997 was due to a tightening of foster home requirements and a reduction in the number of available placements. The Department of Social Services also reports that between 1987 and 1994, the greatest increase in placement had been among children age 6 and under. This age group increased 106% as opposed to a 40% increase for children age 7 and older (*Demographic Report on Consumer Populations,* July 1995).



The increases in the number of children and the severity of disability of children served by Early Intervention and special education preschool programs indicate that the cost trends schools have been experiencing will escalate further in the future.

MAJOR CAUSES OF RISING SPECIAL EDUCATION COSTS

Rather than school district policy and practice, the increases in special education costs are due largely to medical, economic, and social factors.

Changes in Medical Practice

Primary among these causes are changes in medical practice. Medical technology has advanced to such a degree that children who would not have otherwise survived due to prematurity or disability are now surviving. In addition, those whose disability would previously have placed them in hospital or institutional settings are now able to enter public schools or private special education schools. The medical profession has also become increasingly aware of disabilities and is better able to diagnose them at an earlier age. Special education services are often recommended at infancy and children

are placed in Early Intervention programs. At age three, the responsibility for providing special education services is referred to the school district.

In particular, neonatology, the specialty of newborn medicine, has triumphed over the past decades. The last twenty years have seen increasingly premature infants survive at ever-lower mean birth weights. A meta-analysis of outcome studies shows that absolute numbers of low-birth weight premature infants increased over the last two decades. Due to advances in medical technology, survival of children at a birth weight of less than 3.3 pounds has increased from 52% twenty years ago to 73% ten years ago to90% today. While this development is laudable, it has left us with consequences. Multiple studies have shown a close correlation between prematurity/low birth weight and subsequent developmental outcome (see references indicated with a *). Many premature infants are left with life-long developmental and neurological problems.

TABLE 3: SURVIVAL RATES OF INFANTS BORN WEIGHING LESS THAN 3.3 LBS.

BIRTH YEARS	APPROXIMATE NUMBER OF INFANTS BORN WEIGHING < 3 1/3 LBS.	% SURVIVING TO 5 YEARS OF AGE	APPROXIMATE NUMBER SURVIVING AT 5 YEARS OF AGE
1980 – 1985	35,000	52%	18,200
1985 – 1995	46,000	73%	33,600
1995 – current	55,000	90%	49,500

Of infants born at birth weights less than 3.3 pounds, we may expect that 10% will develop classic cerebral palsy with seizures, severe spastic motor deficits and mental retardation. All of these children, approximately 4,950 annually over the last five years, will have multiple medical issues significant to the school day that will necessitate the expansion of medical and nursing capabilities within the school responsible for them.

Fifty percent of children born less than 3.3 pound birth weight will have significant cognitive difficulties without spastic motor problems. Half of these, or approximately 12,375 annually over the last five years, will have measured intelligence in the borderline to mentally retarded range. The other half will have significant to severe learning disabilities.

The actual number of children with disabilities resulting from prematurity, therefore, has increased markedly over the past twenty years. In fact, those numbers have close to tripled as medical technology has improved.

The major cause of this morbidity has been a brain injury known as periventricular leukomalacia. It is the result of biochemical events that begin with low blood flow and oxygen content of the blood in a vulnerable brain. The percentage of premature infants experiencing this has not substantially decreased over the last twenty years. Hence, the significant increase in surviving premature infants means a significant increase in the number surviving with significant medical and cognitive handicaps.

Another entity, known as intraventricular hemorrhage, is also seen in premature infants. It, too, can result in significant brain injury and subsequent cognitive and motor handicaps. It most often presents as a hemiplegia--disuse of one side of the body with associated specific learning disabilities that are severe to profound. When people think of the successes in newborn medicine, they usually think of the success experienced in reducing the rate of intraventricular hemorrhage. Since 1980, it has been estimated that intraventricular hemorrhage has decreased from 35% of premature low birth weight infants to less than 15%. Over this same period, there has been no decrease in the incidence of periventricular leukomalacia. Since this constitutes the statistically more important element of post-premature brain injury, we may expect no significant decrease in the number of children arriving in school with significant handicaps as a result of prematurity.

TABLE 4: SURVIVING INFANTS WITH DISABILITIES

BIRTH YEARS	APPROXIMATE NUMBER WITH CEREBRAL PALSY	APPROXIMATE NUMBER WITH MENTAL RETARDATION	APPROXIMATE NUMBER WITH LEARNING DISABILITIES
1980 – 1985	1,820	4,550	4,550
1985 – 1995	3,360	8,400	8,400
1995 – current	4,950	12,375	12,375

Prematurity and its consequences are not evenly distributed across society. The children of poor and marginalized populations are more likely to be born prematurely and suffer greater difficulties from this than children of middle and upper income families. Various studies suggest that maternal poverty increases the risk of poor developmental outcome from prematurity by factors ranging from 1.5 to 3-fold. Multigenerational poverty has been noted to be particularly associated with poorer developmental outcomes in former premature infants (Wariyar , et al, 1989; Veelken, et al, 1992; Fawer, et al, 1995). Thus, the social and economic burden of educating children with significant developmental sequelae of their premature birth is not evenly or equitably distributed across communities. Urban and rural communities bear a disproportionate share of poverty and a greater share of the disabilities resulting from prematurity.

Medical advances have enabled other populations of students to attend school who would not have been able to do so twenty years ago. For example, two of every one thousand full-term infants are born asphyxiated because of various medical events in the delivery process. This number has been very stable over the last two decades. Two decades ago, however, there was a 35% risk of death in the newborn period after asphyxia. Now nearly all these infants survive, and all come to school age with significant to severe motor and cognitive deficits (Thomson, et al, 1977; Jain, et al, 1991).

Another example is children born with epilepsy. Increasingly effective anti-seizure medications have allowed larger numbers of children with epilepsy to attend school on a regular basis. While only 60% of school-age children with epilepsy were able to attend school without significant interruptions twenty years ago, now in excess of

95% are in school full-time. One percent of the school-age population has epilepsy; 85% have significant special education needs. Given the treatment regimens that allow for full-time schooling, essentially all will require nursing supervision of their anti-seizure medications in school (Sillinpaa, 1990 ; Sillinpaa, 1992).

Children with autism represent another population that is increasingly able to attend school. Autism spectrum disorders (frank infantile autism and pervasive developmental disorders) appear to be present in roughly 2% of the population (Wing, 1993). It is not clear whether the apparent increase over the last twenty years represents an absolute increase in numbers or increased recognition (Arvidsson, et al, 1997). However, increasingly effective medical treatments for elements of behavioral dyscontrol in children with autism, coupled with more effective behavioral treatment modes, have allowed a larger percentage of children with autism to be educated in public school or consortium environments. These children generally require extensive and costly services within the school environment (Arvidsson, et al, 1993).

Twenty years ago roughly two per cent of the school-age population had a medical diagnosis that had impact upon their ability to function in school, both from an academic/cognitive as well as physical standpoint. Currently, conservative estimates suggest that 7.5% of the school age population have a medical diagnosis that has such impact that these children cannot expect to prosper in school without significant multimodal academic and medical assistance in the school setting. The burden is placed disproportionately upon communities that have less access to contemporary treatment and intervention strategies.

The research necessary to implement effective treatments to prevent the disabilities associated with prematurity, birth asphyxia, epilepsy, and autism is only now in its very earliest stages. As a result, the number of students with these disorders attending schools and requiring extensive services is likely to continue to climb for at least the first two decades of this century.

Deinstitutionalization and Privatization

A second factor impacting costs has been the deinstitutionalization of special needs children and the privatization of special education services over the past decade. The best example is the history of the Bureau of Institutional Schools (BIS). The Bureau of Institutional Schools was established within Massachusetts special education law to provide special education services for children residing in facilities under the control of the Departments of Mental Health, Retardation, Public Health, Youth Services and the County Houses of Corrections. However, in 1974, BIS primarily served two populations in state institutions. The first group was children with mental retardation. The second was children in hospital settings due to psychiatric or medical problems. BIS institutions and services for these populations were supported by state rather than local funds.

Currently, the number of children served by BIS, reorganized as Educational Services in Institutional Settings (ESIS), has increased slightly over its 1974 population. However, the population is dramatically different from those served in 1974. Children with mental retardation are served directly through school district funds either in programs within the district or in private or residential placements. This population,

representing the majority of children served by BIS in 1974, is now the complete financial and educational responsibility of public schools. In addition, some children in hospital settings, especially those receiving psychiatric treatment, who would have previously been served by BIS, are also the responsibility of school districts. Now two thirds of ESIS's caseload are incarcerated or detained youth served by the Department of Youth Services and the County Houses of Corrections, with the remainder coming from Departments of Public Health and Mental Health programs.

The shift away from state institutions towards a reliance on local school districts and collaborative or private placement is a positive one. It provides better services within a less restrictive environment. However, the financial resources to address this shift have not come with the children.

Another example is a shift in policy at the Department of Social Services (DSS), especially in the Commonworks Program. This program is designed to respond to the needs of hard-to-reach adolescents with multiple problems through out-of-home care. DSS typically has responsibility for out-of-home care but has sought to increase school districts' financial responsibility for children in the program. The Commonworks Program removes children from the services they are receiving within a district and places them in private day or residential placements due to non-educational, family-related circumstances. School districts are then expected to share the cost of these placements. In the request for proposals for lead agencies for the Commonworks program, there were specific references to the expansion of special education services, with DSS considering school districts as a partner in paying for education services. DSS provided fiscal incentives to lead agencies maximizing cost-sharing agreements with school districts. DSS only set funding in place for educational services for 20% of the youth enrolled in Commonworks, creating an expectation that 80% of the youth enrolled in Commonworks would receive their educational services under a cost-sharing agreement with a school district. The reality is that school districts lack the funding to support this new demand for services.

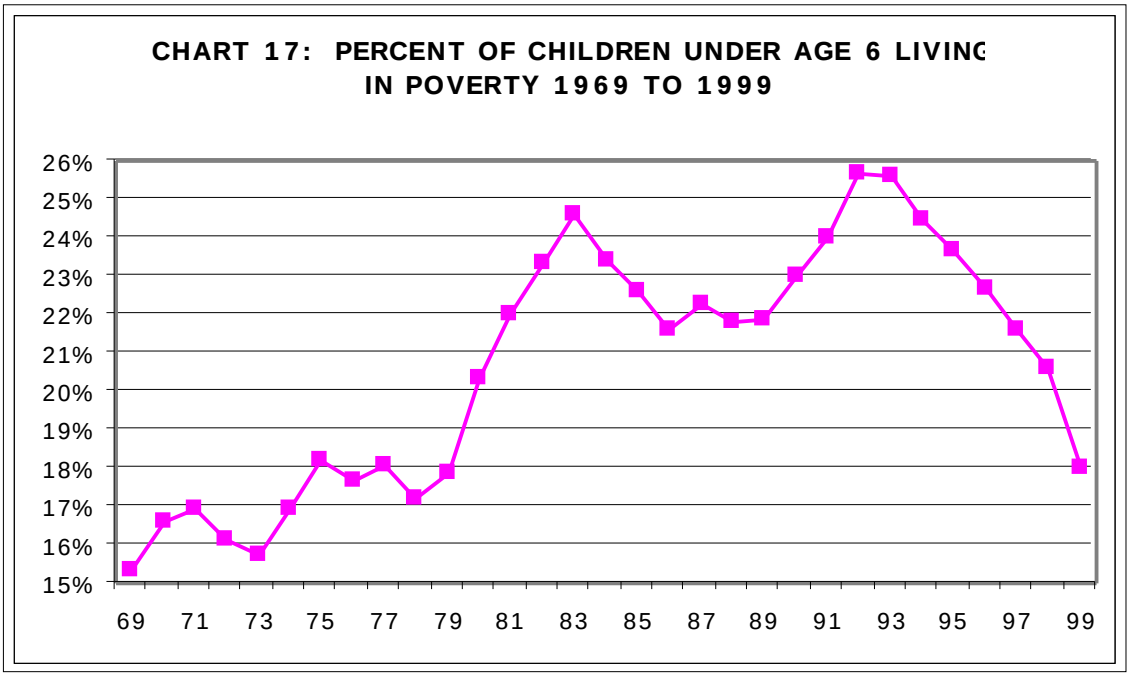
A third example is the increase in the number of children who are state wards placed in foster homes. These children receive services in public schools. However, the placement and movement of these children is controlled by DSS and the foster parent. The dilemma presented by the placement process is the large number of children placed in foster homes in some communities. In addition to the financial strain placed on these school districts, they are given late notification that a student with special needs will be placed in their community. A single foster home taking one special education foster child can require a school district to pay for an out-of-district tuition of over $30,000 plus daily transportation. The state does provide some additional funding for state wards but no funding is available until the year after the costs are incurred. The funding is usually less than actual costs.

The children in both Commonworks and foster care deserve the services and education they receive. The problem is that both programs shift cost and responsibility from state level departments to local districts. Together with the deinstitutionalization of many children in ESIS, the financial and educational responsibilities now fall primarily on local communities without the funding to provide for these children.

Economic and Social Factors

A third cause of special education cost increases has been a higher percentage of children living in poverty. There is a correlation between poverty and special needs (Fujiura & Yamaki, 2000). During the 1980s and early 1990s there was a significant increase in children living in poverty nationally and in Massachusetts. During the "boom years" of the 1980s, the income gap between rich and poor families in Massachusetts grew. The average income for the bottom fifth of the population declined by 12.3%, while the average income for the top fifth grew by 11.9% (Massachusetts Committee for Children and Youth, 1994, p. 14). The Massachusetts Committee for Children and Youth reported that the poverty rate for Massachusetts children under age 18 increased throughout the 1980s to highs of between 17% to 19% for 1990 to 1993 (Massachusetts Committee for Children and Youth, 1996, p. 5). With improvement in the economy in 1994, poverty among children declined slightly. However, the Bureau of the Census reported that the rate for Massachusetts rose again in 1995 to 17.1%. This means that between 17% and 19% of Massachusetts children now in the primary grades lived in poverty for their early years.

The national data on children in poverty reveal that the percent of children under six years of age living in poverty rose significantly during the 1980s and early 1990s to a high of 25.7% in 1993 (www.census.gov/income/histpov/hstpov21.txt). The rates have remained relatively high through 1998. The increase in poverty among children nationally since the 1980s may account for a portion of the increase in special education enrollments throughout the last two decades.



Adding to the impact of poverty is the increase in families experiencing social and economic stress. Many communities and school districts have seen increases in such indicators as child abuse and neglect, alcoholism and drug use, and dysfunctional family

environments that lead to increases in children requiring special education services. According to the Department of Social Services, reports of child maltreatment were more than two and half times higher in 1999 than in 1983, as was the number of cases of confirmed maltreatment through supported investigations. DSS's report *Child Maltreatment Statistics 1995* states that "families reported for child maltreatment displayed the following characteristics: substance abuse, poverty, economic stress (and the associated problems of poor housing and limited community resources), and a lack of specific parenting skills" (p. 2). In cases of children found to be maltreated in Massachusetts in 1997, 82% involved neglect, 24% involved physical abuse, 5% sexual abuse, and 2% emotional maltreatment.

TABLE 5: CHILD MALTREATMENT: CHILDREN WITH REPORTS AND INVESTIGATIONS 1983-1999*

YEAR	*MALTREATMENT REPORTS*	*INVESTIGATIONS*	*SUPPORTED INVESTIGATIONS*
83	36,258	28,204	12,518
84	46,393	34,326	16,515
85	49,320	35,971	18,203
86	51,759	35,085	18,291
87	52,391	33,832	17,356
88	61,506	37,229	18,957
89	70,713	42,590	22,532
90	82,831	52,492	28,621
91	88,748	52,853	28,048
92	89,592	47,960	24,601
93	93,752	47,587	24,186
94	97,210	51,452	26,325
95	96,255	51,285	25,375
96	101,180	54,403	27,219
97	103,533	58,743	29,815
98	97,108	52,899	27,559
99	98,799	56,335	30,349

* Source: Department of Social Services

If the Commonwealth of Massachusetts and other states wish to address the financial dilemma presented by special education, they need to recognize that the major causes of the increase in costs are not school district policy and practice. Instead, they are advances in medical technology, deinstitutionalization and privatization of services, and increases in children in poverty and families experiencing social and economic stress.

The Foundation Formula

Rather than helping school districts adequately address special education cost increases, Massachusetts' education reform foundation formula exacerbates the problem by underestimating the percentage of children in special education programs as well as the cost of these programs. For example, in FY99 16.7% of the total student enrollment statewide was being served in special education programs. However, the foundation formula locked in a figure of 14% of student enrollment being served 25% of

the time in special education programs. The formula adds an additional one percent for out-of-district placements for a total of 15%. Locking in a 1% limit for out-of-district placements is particularly problematic. Given the small size of many Massachusetts districts, enrollment can vary widely, especially high cost out-of-district placements. Out-of-district placements, in fact, can vary between 1% and 3% with smaller districts, those that can least afford it, experiencing the greatest variation. The formula makes no accommodations for these variations between districts.

More significant, the formula underestimated the cost for services to these students. For example, the formula provided $2,384 for a special education pre-school student in FY99, yet the statewide average cost was $9,988. The formula allocated $17,269 for the tuition costs of an elementary age special education student enrolled in a private day or residential placement. However, the FY99 statewide average cost for a private day placement was $35,509 and a residential placement was $46,275. In fact, only 11.9% of the state's FY99 foundation budget was allocated to pre-school, in-district, and out-of-district special education costs while actual expenditures from school district budgets averaged 19.54%.

Therefore, as special education costs continue to rise, the underestimates built into the formula remain inflexible and unresponsive to these changes. Consequently, they produce unrealistic estimates for districts' foundation budgets and provide no additional state aid to address the problem.

Because of the variability of impact that special education has on districts, especially small and medium size districts, the increases in special education have exceeded 100% of new education reform aid for many school districts in Massachusetts. Others have experienced increases equivalent to a large percentage of their new education reform dollars. Statewide special education cost increases are equivalent to 38% of all new education reform aid to local districts. Clearly, the State's failure to adequately fund the costs of educating students with severe disabilities is compromising school districts' ability to implement the kinds of instructional improvements intended in the Education Reform Act.

Changes in Special Education Law and Policy

Based on the concerns raised in the report issued by the Massachusetts Association of School Superintendents as well as concerns expressed by many municipal officials and school board members, the state legislature enacted reforms in special education in July 2000.

The final FY01 State Budget contained a number of outside sections that changed the Massachusetts Special Education Law (M.G.L. c 71B). Many of the changes were intended to bring the Massachusetts Special Education Law into alignment with the federal IDEA. Most significant, the legislature adopted the federal standard of "free and appropriate public education," replacing the more expansive standard of "maximum feasible benefit." However, since Massachusetts will maintain its own special education law, it is not clear how this change will bring Massachusetts into full alignment with IDEA. Special education advocacy groups indicated they will test in court any changes school

districts make using the new perceived lower federal standard. Ultimately, the courts will determine the benefits intended by the new Massachusetts' law.

The state also moved closer to the federal definitions of a disability and the federal requirements for independent evaluations. However, the legislature chose to adopt provisions that were still more expansive than the federal standards in these areas. The Massachusetts law only adopted the federal definition of specific learning disability and emotional disability. This leaves other disabilities subject to Massachusetts standards that may be interpreted to be different from the federal IDEA definitions. This will cause some confusion for school districts.

Massachusetts' parents have always had the right to a no-cost independent evaluation of their child after a school has completed the initial evaluation. The change in law maintains this right for a family of four making under $68,000 per year. The local school district has no choice but to pay for this evaluation even if it feels the initial school evaluation is accurate. These changes move Massachusetts toward the requirements of IDEA, but still provide for expansive definitions of disability and greater use of independent evaluations at the expense of the local school district.

Other changes involve expanding pre-referral opportunities and requiring that knowledge of special education be an integral part of certification and recertification of classroom teachers.

Two provisions of the law attempt to address the financial issues facing school districts. The first is an attempt to provide financial relief to a school district for unanticipated special education placements by creating a shared risk pool to which districts contribute much like an insurance policy. However, the risk pool provides only relief in the first year of expense. The local school district will need to budget for the expense in future years.

The second provision provides some relief for out-of-district costs by creating a new formula in which the state shares a greater percentage of the costs with districts. In the past, the state directly paid 50% of the cost of all residential placements but none of the costs for other special education students. The new legislation drops this provision and provides financial assistance to a district when costs for an in-district student exceed three times the per pupil average of the foundation formula and when costs for an out-of-district student exceed four times the per pupil average of the foundation formula. For an in-district student the state will provide 80% of the costs above this point and for an out-of-district student the state will provide 65%. For FY2000, the per pupil average was $6,700. Therefore, a school district would incur the complete cost for the first $20,100 for an in-district student and the first $26,800 for an out-of-district student. Although this provision appears to be beneficial to districts, in actual operation most districts will receive only very modest relief in the range of 1% to 3% of their total special education budget. Some districts will actually receive less financial assistance than they currently do through the 50% the state provides for residential placements. Even more problematic, local school districts will now pay the total cost of the residential placement instead of the 50% they currently pay but will not receive state aid until the next fiscal year. This means that as districts make the

transition to the new formula, they will have to increase their special education budget substantially in the first year of its implementation.

In reviewing the financial aspects of special education, the state legislature commissioned a study to determine if there would be any savings produced in changing to the federal disability definitions and the federal standard of free and appropriate public education. The study, completed by McKinsey and Company, concluded that changing the eligibility rules and criteria could result in up to 30,000 fewer students enrolled in special education and could free up approximately $125 million from local special education budgets.

In spite of their analysis, we do not anticipate that the school districts will be able to realize this degree of savings. The estimate of savings was derived from a comparison of the percentage of students in special education in Massachusetts to the percentage of students in special education nationally. Based on this, McKinsey assumed that changing the eligibility criteria would enable the state to lower the percentage of students in special education. There are two problems with this analysis. First, school districts have already rigorously applied the existing eligibility standards to such a degree that the rate of growth in special education in Massachusetts is less than half the rate of growth nationally. Second, the study did not take into account the rapidly rising percentage of children in special education nationally. Finally, the children who might no longer qualify for special education services have educational issues that will still need to be addressed. Although these would now be addressed through additional regular education rather than special education services, they would still represent a cost similar to what the school district was paying through special education services. There will be some savings realized in the change, especially in the cost of the bureaucratic red tape associated with special education, but the savings will be modest.

The study also concluded that moving the Massachusetts special education standard to the federal standard could, at full implementation, shift between 2,200 and 35,000 students into different educational environments and could save between $36 million and $8 million. They provided this wide range of savings because there was no definitive evidence about whether or not the current state standard of maximum feasible benefit plays a role in keeping children in the least restrictive environment. Again, we believe that the savings will be very modest and even this savings may be consumed by expensive litigation in the short term. Districts have done their best to provide in-district programs for children and therefore we do not anticipate a great decline in out-of-district placements. Again, there is a significant benefit to the change in that it provides school districts with a better chance to design effective in-district programs for children. However, it will not produce significant savings.

Although many of the legislative changes may have a positive benefit for school districts, the legislation does not address the essential problem. The increase in cost is not due to district policy and practice and will not be solved by legislating changes in these practices. The increasing numbers of more severely disabled children entering school have required the allocation of additional resources to educate and care for these students. The state and the federal government need to recognize that these increases are real and that the only way to address them is to provide additional relief to districts. The Massachusetts Association of School Superintendents originally recommended that

the state support 90% of the cost of special education placements, whether in-district or out-of-district, beyond three times the per pupil average within the foundation formula with direct payment to the out-of-district placement by the Massachusetts Department of Education. This would ensure real relief to districts and a shared responsibility between local communities and the state.

RECOMMENDATIONS

Based on the data we have seen, we have to be realistic about the rising costs of special education. The increases in seriousness of disabilities in the population in general and the increase in the number of young children with moderate and severe disabilities *will require greater expenditures in special education*. Even though districts in Massachusetts are making their best efforts to provide regular education programs and services as an alternative to substantially separate special needs programs, these regular education programs and services require additional resources. Learning disabilities do not disappear just because a child is not classified as a special education student. These are realities policy makers need to face.

The long-term solution requires that the state and federal government support school districts in meeting the responsibility for special education. Communities, especially smaller communities, cannot meet the needs of children who cost the district over $20,000 without compromising other programs. Currently, those costs are borne within the financial capabilities of the community. This places an unfair burden on local communities when the responsibility for these children is best addressed through the collective efforts of all citizens within the state and throughout the nation.

One proposal for addressing the increasing costs is to have the local community provide for the educational costs and the state or federal government provide for medical, psychiatric, physical therapy, or occupational therapy services. Although schools should not be required to address medical problems, it becomes so difficult to define which service is educational and which is medical that we believe it is best to find a resolution that handles the problem more holistically.

The only effective approach is to increase the state's and federal government's financial responsibility for special education.

The recommendation for increasing the state's responsibility for special education costs is not new. The final report of the first full review of special education in Massachusetts in 1982, entitled *Implementing Massachusetts' Special Education Law: A Statewide Assessment*, recommended:

> It is strongly recommended that the department (Department of Education) and affected constituencies work to see that Chapter 70 ensures adequate funding of the real cost of special education. First, significantly more local aid needs to be paid through the education formula of Chapter 70....
>
> Given the degree of local resentment over special education transportation costs, the study staff recommends that the Department of Education take action. The local perception that the state mandates services but won't pay the

> tab seems to be of considerable validity in the area of transportation.... A statute already exists (Chapter 367 of the Acts of 1978) that can help resolve the problem of insufficient reimbursement. The legislature should fully fund the Bilingual and Special Education transportation provision in order that its actions become consistent with its intentions. (pp. 30-31)

This Board of Education commissioned study also found that "the case studies analysis refutes assertions that local administrators manipulate special education placements to maximize revenues" (p. viii).

On a federal level, the landmark Education for All Handicapped Children Act of 1975 (Public Law 94-142) established a federal commitment to pay for 40% of the excess cost of its special education mandate. This mandate has never been met and the federal government contributes a modest 7% of the costs of special education. Additional resources provided at a federal level would help relieve the burden on states and local school districts.

CONCLUSION

We face a challenging dilemma. Children are entering our school systems with significantly greater special needs and these needs are often identified at a very early age. The increased cost for special education services is seriously compromising regular education programs and education reform in states throughout the country. We need a solution that addresses the financial crisis emerging in many districts while at the same time meeting the real and substantial needs of these children. In addition, we need a solution that does not blame the children or those working with these children and does not pit regular education against special education.

The Massachusetts Education Reform Act set ambitious new standards and dedicated significant funds for the improvement of education. However, for the majority of districts the increase in special education spending has meant that little of the new funds allocated to education have been available for the improvement of regular education. For all too many districts the situation is critical. The long-term interest of children with disabilities will not be served by pulling resources from regular education classrooms. The common ground among regular education and special education parents is in strengthening the ability of regular education to handle the needs of children with disabilities. Action on the part of the state of Massachusetts and the federal government is imperative so that the needs of both regular education and special education children can be well served and the goals of education reform realized. It would be tragic if education reform, increased funding, and public education in general were declared failures when, in fact, the experiment was never really tried.

The long-term solution lies in addressing the underlying causes of the special needs increases--the medical, social, and economic issues that cause children to require special education. We need to invest in medical research directed toward the prevention of disability in premature infants. We need to invest in reweaving the social and economic support systems for families. These are difficult problems to solve but we encourage our state and federal legislators to work toward these long-term solutions.

AUTHORS

Sheldon Berman, Ed.D., is the Superintendent of the Hudson Public Schools. He serves on the Executive Committee of the Massachusetts Association of School Superintendents and is the author of the MASS report "Education Reform at Risk," the co-chair of MASS's Special Education Task Force and the co-author of the MASS 1997 report "The Impact of Special Education on Education Reform." He is the author of *Children's Social Consciousness*, editor for *Promising Practices in Teaching Social Responsibility,* and writer of numerous articles on education.

Perry P. Davis, Ed.D., is the Superintendent of the Dover-Sherborn Public Schools. Prior to becoming superintendent, he was a special education teacher and director of special education. He is a Past-President of the Massachusetts Association of School Superintendents, the co-chair of MASS's Special Education Task Force and the co-author of the MASS 1997 report "The Impact of Special Education on Education Reform."

Ann Koufman-Frederick, Ph.D., is the Director of Technology Initiatives at the Massachusetts Association of School Superintendents. Previously she was an instructional technology specialist with the Brookline (MA) Public Schools and a school psychologist for children with learning disabilities and their families.

David K. Urion, M.D., is a clinical child neurologist and the Director of the Learning Disabilities Program at Children's Hospital in Boston. He has faculty appointments at Harvard Medical School's Department of Neurology and the Harvard Graduate School of Education.

REFERENCES

Cedar Rapids Community School District v. Garret F. (119, S.Ct.992 U.S. 1999).

Center for Education Finance. Frequently asked questions. Available: csef.air.org [2000, Oct.].

Chambers, J. G., Parish, T. B., Lieberman, J. C., and Wolman, J. M. (1998). What are we spending on special education in the U.S.? *CSEF Brief, 8*. Palo Alto, CA: Center for Special Education Finance.

Committee on Goals 2000 and the Inclusion of Students with Disabilities. (1997). Students with disabilities and standards-based reform. In L. M. McDonnell, McLaughlin, M.J., & Morison, P. (Ed.), *Educating One and All* . Washington D.C.: National Academy Press.

David D. vs. Dartmouth School Committee, 775 F.2d, 411 (1st Cir. 1985).

Educational Research Service , (1999). *Superintendents briefing book: Vital information for school district leaders*. Arlington, VA: ERS.

Etscheidt, S. E., and Bartlett, L. (1999). The IDEA amendments: A four-step approach for determining supplementary aids and services, *Exceptional Children*, 65(2),163-174.

*Fanaroff, A. A., Wright, L. l., and Stevenson, D. K. (1995). Very low birth weight outcomes of the National Institute of Child Health and Human Development National Research Network, May 1991 through December 1992, *American Journal of Obstetrics and Gynocology*, 173: 1123 –1141.

*Fawer, C. L., Besnier, S., Forcada, M. (1995). Influence of of perinatal, developmental, and environmental factors on cognitive abilities of preterm children without major impairments at 5 years, *Early Human Development*, 43: 151-164.

Fujiura, G. T. and Yamaki, K. (2000). Trends in demography of childhood poverty and disability, *Exceptional Children,* 66(2), 187-199.

*Halsey, C. L., Collins, M. F., and Anderson, C. L.(1993). Extremely low birth weight children and their peers: A comparison of preschool performance, *Pediatrics*, 91: 807 – 811.

Hehir, T., and Gramm, S., (1999). Special education: From legalism to collaboration. In J. P. Heubert (Ed.), *Law and School Reform* (pp. 205-243). New Haven: Yale University Press.

Hunter, B. (2000). *AASA Proposal to Make IDEA an Entitlement*. Arlington, VA: Association of School Administrators. Available: www.aasa.org/Advocacy/FullyFundingIDEA/indrx.htm [2000, Oct.].

*Jain, l., Ferre, C., and Vidyasagar, D. (1991). Cardiopulmonary resuscitation of apparently stillborn infants: Survival and longterm outcome, *Journal of Pediatrics*, 118 : 778-782.

Katsiyannis, A. and Yell, M. L. (2000). The supreme court and school health services: Cedar Rapids v. Garret F. *Exceptional Children*, 66(3), 317-326.

*Leonard, C. H., Piecuch, R. E., Ballard, R. A., and Cooper, B. A. (1994). Outcome of very low birth weight infants: Multiple gestations versus singletons, *Pediatrics*, 93: 611- 615.

Massachusetts Committee for Children and Youth. (1996). *State of the Child 1996*. Boston, MA: Massachusetts Committee for Children and Youth.

Massachusetts Committee for Children and Youth. (1994). *Massachusetts Kids Count 1994.* Boston, MA: Massachusetts Committee for Children and Youth.

Massachusetts Department of Education. (1999). End of Year Financial Report 1990-1999.

Massachusetts Department of Social Services. (1998). *Child Maltreatment Statistics 1997.* Boston, MA: Massachusetts Department of Social Services.

Massachusetts Department of Social Services. (1996). *Child Maltreatment Statistics 1995.* Boston, MA: Massachusetts Department of Social Services.

Massachusetts Department of Social Services. (1995). *Demographic Report on Consumer Populations, July 1995.* Boston, MA: Massachusetts Department of Social Services.

*McCormick, M. C., Gortmaker, S. L., Sobol, A. M. (1990). Very low birthweight children: Behavior problems and school difficulties in a national sample, *Journal of Pediatrics*, 117:687-693.

McKinsey and Company. (2000). *Special Education in Massachusetts*. Boston, MA: Massachusetts Legislature-Joint Committee on Education, Arts and Humanities.

McLaughlin, M. J. and Warren, S. H. (1994). Restructuring special education programs in local school districts: The tensions and the challenges. *The Special Education Leadership Review*, 2-21.

Moore, M. T., Strang, E. W., Schwartz, M. and Braddock, M. (1988). *Patterns in special education service delivery and cost*. Washington, D.C.: Decision Resources Corporation.

*Majnemer,A., Rosenblatt, B., and Riley, P. S. (1993). Influence of gestational age, birth weight, and asphyxia on neonatal neurobehavioral performance, *Pediatric Neurology*, 9:181-186.

*Msall, M. E., Buck, G. M., and Rogers, B. T. (1991). Risk factors for major neurodevelopmental impairments and the need for special education resources in extremely premature infants. *Journal of Pediatrics* , 119: 606-614.

National Center for Education Statistics, (1999). *NCES Fast Facts- Enrollment trends*. Washington, DC: National Center for Education Statistics. Available: nces.ed.gov/fastfacts/display.asp [2000, Oct.].

National Center for Education Statistics, (1998). *What are we spending on special education in the U.S.?* Washington, DC: National Center for Education Statistics. Available: nces.ed.gov/edfin/faqs/speced1.asp#table1 [2000, Oct.].

National School Boards Association, (2000). *Special Education: Honoring the Federal Commitment*. Alexandria, VA: National School Boards Association. Available: www.nsba.org/advocacy/issueupdates/idea.htm [2000, Oct.].

Newcomer, J. R. and Zirkel, P. A. (1999). An analysis of judicial outcomes of special education cases. *Exceptional Children*, 65(4), 469-480.

Parrish, T. B., and Wolamn, J. M. (1996). *Escalating Special Education Costs: Reality or Myth?* Palo Alto, CA: Center for Special Education Finance. Available: csef.air.org [2000, October 2000].

Parrish, T. B. (1996). *Special Education Finance: Past, Present, and Future*. Policy Paper 8. Palo Alto, CA: Center for Special Education Finance.

*Roth, J., Resnick,M. B. , Ariet, M. (1995). Changes in survival patterns of very low birth weight infants from 1980 to 1993, *Archives of Pediatrics and Adolescent Medicine*, 149:1311-1317.

?Rothstein, R. M. and Miles, K. H. (1995). *Where's the 0oney Gone? Changes in the Level and Composition of Education Spending.* Washington D.C.: Economic Policy Institute.

*Saigal, S., Hoult, L. A., and Streiner, D. l. (2000). School difficulties at adolescence in a regional cohort of children who were extremely low birth weight, *Pediatrics*, 103: 325-331.

*Saigal, S., Szatmari, P., and Rosenbaum, P . (1991). Cognitive abilities and school performance of extremely low birth weight children and matched control children at 8 years: A regional study, *Journal of Pediatrics*, 118 : 751-760.

State Special Education Finance Systems, (1995). Table 2-8 Special education expenditures per special education student 1987-88 (in 1995-96 prices). U.S. Department of Education. Available: csef.air.org [2000, Oct.].

Stjernqvist, K. and Svenningsen, N. W. (1993). Extremely low birth weight infants less than 901g growth and development after one year of life, Acta Paedtrica Scandinavica*, 82:40 – 44.

*Thomson, A. J., Searle, M., and Russell, G. (1977). Quality of survival after severe birth asphyxia, *Archives of Diseases of Childhood*, 52:620 – 626.

*Thompson, C. M., Buccimazza S. S., Webster, J. (1993). Infants of less than 1250 grams birth weight at Groote Schuur Hospital: Outcome at 1 and 2 years of age, *Pediatrics*, 91: 961-968.

U.S. Department of Education, (1999). *Twenty-first Annual Report to Congress on the Implementation of the Individuals with Disabilities Act* . Washington DC: Office of Special Education.

U.S. Department of Education, (1999). Table AA10. Office of Special Education. Available: www.ideadata.org/tables/ar_aa10.htm [2000, Oct.].

U.S. Department of Education, (2000). *SEEP: Special Education Expenditure Project*. Palo Alto, CA: Center for Special Education Finance. Available: www.seep.org/seep_about2.html#RQs [2000, Oct.].

*Veelken, N., Stolhoff, K.,and Claussen, M. (1992). Development and perinatal risk factors in very low birthweight infants: Small versus appropriate for gestational age, *Neuropediatrics*, 23:102-107,

*Veelken, N., Schopf, M., Dammann, O., and Schulte, F.J. (1993) Etiological classification of cerebral palsy in very low birth weight infants, *Neuropediatrics*, 24 : 74–76.

The Vermont-Oxford Trials Network . (1993) Very low birth weight outcomes for 1990: investigators of the Vermont-Oxford Trials Network Database Project, *Pediatrics*, 91: 540-545.

*Wariyar, U., Richmond, S., Hey, E. (1989). Pregnancy outcome at 24–31 weeks gestation: Neonatal survivors, *Archives of Diseases of Childhood*, 64: 678-686.

*Weisglas-Kuperus, N., Koot, H. M., and Baerts, W . (1993). Behavioral problems of very low birth weight children, *Developmental Medicine and Child Neurology*, 35:406-416.

*Wood, N., Marlow, N., Costeloe, K., Gibson, A. T., and Wilkinson,A. W. (2000). .Neurologic and developmental outcome after extremely preterm birth, *New England Journal of Medicine*, 343: 378–384.

APPENDIX A

PROGRAM PROTOTYPES (502.0)

PROGRAM PROTOTYPE 502.1	Regular education program with modifications.
PROGRAM PROTOTYPE 502.2	Regular education program with up to 25% time out.
PROGRAM PROTOTYPE 502.3	Regular education program with up to 60% time out.
PROGRAM PROTOTYPE 502.4	Substantially separate program with more than 60% time out and with access to regular education.
PROGRAM PROTOTYPE 502.4i	A substantially separate special education program, run by the public school, in a facility other than a public school regular education facility.
PROGRAM PROTOTYPE 502.5	Private day school program.
PROGRAM PROTOTYPE 502.6	Private residential school program.
PROGRAM PROTOTYPE 502.7	(a and b) Home, hospital and regional adolescent program. a. 14-60 days b. 60+ days
PROGRAM PROTOTYPE 502.8	(a, b, and c) Programs for children 3 and 4. a. primary care b. integrated center-based c. separate center-based
PROGRAM PROTOTYPE 502.9	Diagnostic Evaluation
PROGRAM PROTOTYPE 510.10	Programs for those who need services who reside in certain facilities under DMH, DPH, DYS, and others as designated by the Board of Education.
PROGRAM PROTOTYPE 502.11	Optional program for students 14-21.

APPENDIX B: REGULAR EDUCATION AND SPECIAL EDUCATION SPENDING FY90 TO FY99 FOR MASSACHUSETTS*

FISCAL YEAR	*REGULAR EDUCATION*	*% CHANGE*	*SPECIAL EDUCATION*	*% CHANGE*	*HEALTH SERVICES*	*% CHANGE*	*BILINGUAL EDUCATION*	*% CHANGE*	*OTHER*	*% CHANGE*	*TOTAL EXPENDITURES*	*% CHANGE*	*SPED AS A % OF TOTAL*
FY90	1,949,316,559		640,818,432		24,591,657		77,757,033		1,034,917,514		3,727,401,195		17.19%
FY91	1,979,867,901	1.57%	672,245,637	4.90%	26,382,743	7.28%	79,865,356	2.71%	1,040,147,569	0.51%	3,798,509,206	1.91%	17.70%
FY92	1,965,325,289	-0.73%	676,891,681	0.69%	26,205,869	-0.67%	76,311,537	-4.45%	1,019,391,674	-2.00%	3,764,126,050	-0.91%	17.98%
FY93	2,049,673,975	4.29%	696,351,938	2.87%	26,066,932	-0.53%	83,574,446	9.52%	1,056,826,420	3.67%	3,912,493,711	3.94%	17.80%
FY94	2,135,455,533	4.19%	764,917,716	9.85%	29,630,966	13.67%	98,355,390	17.69%	1,150,494,539	8.86%	4,178,854,144	6.81%	18.30%
FY95	2,281,791,721	6.85%	835,218,314	9.19%	32,673,512	10.27%	110,183,085	12.03%	1,226,871,038	6.64%	4,486,737,670	7.37%	18.62%
FY96	2,397,464,765	5.07%	903,728,473	8.20%	36,717,383	12.38%	117,316,277	6.47%	1,366,096,402	11.35%	4,821,323,300	7.46%	18.74%
FY97	2,538,203,909	5.87%	985,747,634	9.08%	40,861,821	11.29%	122,205,126	4.17%	1,459,364,634	6.83%	5,146,383,124	6.74%	19.15%
FY98	2,707,386,014	6.67%	1,064,620,083	8.00%	46,436,651	13.64%	128,226,672	4.93%	1,550,679,935	6.26%	5,497,349,355	6.82%	19.37%
FY99	2,904,875,305	7.29%	1,166,629,592	9.58%	52,685,142	13.46%	135,544,845	5.71%	1,711,934,501	10.40%	5,971,669,385	8.63%	19.54%
CHANGE FY90-99	955,558,746	49.02%	525,811,160	82.05%	28,093,485	114.24%	57,787,812	74.32%	677,016,987	65.42%	2,244,268,190	60.21%	

* Source: Department of Education End-of-the-Year School District Reports. Does not include Vocational-Technical, Trade, and Agricultural Schools

APPENDIX C: SPECIAL EDUCATION ENROLLMENT BY PROTOTYPE FY85-FY00

PROTOTYPE	*FY85*	*FY86*	*FY87*	*FY88*	*FY89*	*FY90*	*FY91*	*FY92*	*FY93*	*FY94*	*FY95*	*FY96*	*FY97*	*FY98*	*FY99*	*FY00*
502.1	10,969	11,100	11,776	12,081	12,786	13,462	14,763	15,720	17,280	19,007	20,878	23,186	24,699	25,147	25,760	21,735
502.2	69,763	69,396	68,142	67,704	67,699	68,516	69,429	70,377	70,042	71,033	72,401	72,570	72,804	74,261	76,986	76,930
502.3	18,610	19,010	19,408	19,978	20,968	21,287	21,315	22,406	21,803	21,057	20,596	20,185	19,094	19,545	20,715	21,840
502.4	21,302	22,432	23,584	24,420	25,089	25,584	24,841	24,315	23,484	22,485	21,937	21,413	21,467	22,063	22,438	22,656
502.4(i)	2,596	2,686	2,678	2,907	2,730	2,848	2,686	2,571	2,505	2,457	2,282	2,486	2,485	2,556	2,707	2,871
502.5	3,729	3,882	3,899	4,220	4,223	4,286	4,151	4,113	3,953	4,095	4,223	4,235	4,416	4,795	4,919	5,088
502.6	736	697	673	738	845	870	877	861	869	917	1,015	1,097	1,123	1,138	1,226	1,271
502.7	941	908	1,090	1,058	763	789	770	735	671	645	710	682	565	584	585	461
502.8	3,218	3,500	4,161	4,654	5,223	5,731	5,875	6,634	7,120	7,735	7,801	8,058	8,475	8,953	9,589	9,602
TOTAL .1-.7	128,646	130,111	131,250	133,106	135,103	137,642	138,832	141,098	140,607	141,696	144,042	145,854	146,653	150,089	155,336	152,852
TOTAL SPED	131,864	133,611	135,411	137,760	140,326	143,373	144,707	147,732	147,727	149,431	151,843	153,912	155,128	159,042	164,925	162,454
TOTAL ENROLLMENT	862,440	846,430	835,960	827,340	825,409	827,396	836,383	848,368	861,983	879,663	895,772	916,927	935,623	950,405	963,761	972,260
SPED AS A % OF TOTAL	15.29%	15.79%	16.20%	16.65%	17.00%	17.33%	17.30%	17.41%	17.14%	16.99%	16.95%	16.79%	16.58%	16.73%	17.11%	16.71%

APPENDIX D: MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH EARLY INTERVENTION
CHILDREN SERVED WITH A SIGNIFICANT DISABILITY FY92-FY99

	CHILDREN SERVED	% INCREASE	CHILDREN WITH MODERATE TO SEVERE DISABILITY	% INCREASE	% MODERATE TO SEVERE DISABILITY
FY92	9,809		5,818		59.31%
FY93	12,118	23.54%	7,390	27.02%	60.98%
FY94	12,903	6.48%	8,924	20.76%	69.16%
FY95	14,389	11.52%	10,745	20.41%	74.68%
FY96	15,508	7.78%	11,990	11.59%	77.31%
FY97	17,247	11.21%	13,159	9.75%	76.30%
FY98	18,322	6.23%	14,882	13.09%	81.22%
FY99	20,075	9.57%	17,290	16.18%	86.13%
CHANGE FY92-FY99	10,266	104.66%	11,472	197.18%	