

A Commitment to Pre-Kindergarten S A Commitment to National Security

High-Quality Early Childhood Education Saves Billions While Strengthening Our Military and Our Nation







Who We Are



Shown in the photo are (left to right): Major General David M. Edgington, US Air Force (Ret.), Admiral James M. Loy, US Coast Guard (Ret.) and General Richard E. Hawley, US Air Force (Ret.) on the deck of the *Battleship Wisconsin*, in Norfolk, VA. February 2012 at a news conference supporting high-quality early education.

MISSION: READINESS is the nonprofit, nonpartisan national security organization of more than 350 retired generals, admirals and other senior retired military leaders calling for smart investments in America's children. It operates under the umbrella of the nonprofit Council for a Strong America.

For a full listing of our membership, please see our website at www.missionreadiness.org.

Acknowledgments

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Photos on summary page courtesy of US Department of Defense.



Summary

Today's military is an exacting environment sustained by complex technology and systems unimagined in generations past. It demands the very best of its service members.

Alarmingly, the Department of Defense estimates that 75 percent of all young Americans are unable to join the military primarily because they are too poorly educated, have a serious criminal record, or are too overweight. More than 1 in 5 high school graduates who tried to join the Army could not score highly enough on the military's entrance exam to be allowed to serve.

The retired admirals and generals of MISSION: READINESS recognize that there are many factors impacting educational achievement. But there is one factor that has been proven to have a crucial impact on children from all backgrounds, and that is high-quality early learning.

New data from across New Jersey confirm that pre-kinder-garten can be brought to scale with strong and lasting results. By the time they were beyond third grade, children who participated in **New Jersey's** high-quality program for two years were three-quarters of an academic year ahead in math and two-thirds of an academic year ahead in literacy compared to those who did not. Numerous studies of voluntary high-quality programs in states such as **Tennessee**, **Michigan**, **Arkansas**, **West Virginia**, **New Mexico** and **Pennsylvania** have also shown impressive gains in literacy and reductions in the number of children needing special education services or being held back in school.

These new and emerging research results are bolstered by long-term studies of participants from high-quality programs in **Michigan** and **Illinois**, which found they were far more likely to graduate from high school and far less likely to be involved in criminal activity in later years.

While debate about education policy is often contentious, the value of high-quality early learning is recognized by policymakers across the political spectrum. Numerous states have invested in and benefited from high-quality pre-K and, in 2013, Republican and Democratic governors in Colorado, Michigan, Mississippi, New Mexico, New York, North Dakota, Pennsylvania and Virginia have made bold moves in support of new investments in quality pre-K.

This support coincides with an extremely challenging economic environment for states. States have tried to protect, and in some states even expand programs during



these difficult times. Overall, however, in 2011 and 2012 enrollment levels nationally stalled and the funding available to maintain quality in state programs decreased significantly.

The Administration recently proposed a state-federal partnership that offers states the resources to create, strengthen and expand quality early learning programs for children from low- and moderate-income families. The proposal puts states and local communities in the driver's seat when it comes to developing their programs. The partnership would enable states to offer children well-qualified teachers, small student-teacher ratios, and other elements that have a proven impact on learning. It could also lead to a 15 percent increase in graduation rates for low- and moderate-income children, which would amount to nearly two million more graduates nationwide from the 10-year investment.

Based on an independent analysis, high-quality prekindergarten can cut crime, welfare and other societal costs and produce average net benefits to society of \$15,000 for every child served. Nationwide, that could produce \$150 billion in net benefits from the \$75 billion proposed investment in the next 10 years.

America has bipartisan support for our sophisticated 21st Century military systems. But without qualified personnel, those investments will be severely compromised and our national security will be put at risk. Support from both Republican and Democratic policymakers demonstrates a commitment to high-quality school readiness programs from both sides of the aisle. The more than 350 retired generals and admirals of Mission: Readiness know that investing in high-quality early childhood education, from birth to kindergarten entry, is essential for the future strength of our military and our nation.



A Commitment to Pre-Kindergarten Is a Commitment to National Security

High-Quality Early Childhood Education Saves Billions While Strengthening Our Military and Our Nation

75 Percent of Young Americans Are Not Eligible to Serve in the Military

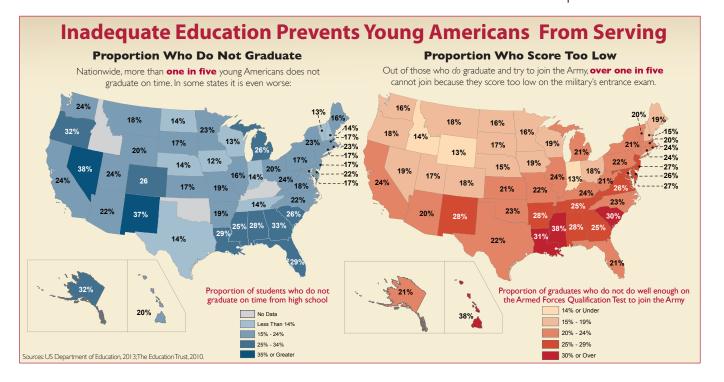
Military service is out of reach for an estimated 75 percent of all young Americans between the ages of 17 and 24. There are three primary reasons: they are too poorly educated, they have serious criminal records, or they are too overweight.¹ Twenty-two percent of young people do not graduate on time from high school, and the military rarely takes anyone without a diploma anymore.² Even among young adults who do finish high school, 23 percent who seek to enlist in the Army cannot score highly enough on the military's exam for math, literacy and problem-solving to be allowed to serve.3 One in 10 young adults cannot join because they have at least one prior conviction for a felony or serious misdemeanor.⁴ National surveys conducted for the military and by the Centers for Disease Control and Prevention (CDC) show that approximately one in four young adults is unable to serve because of excess body fat.5 The limited pool of young people qualified for military service jeopardizes our military readiness and threatens future national security.

High-Quality Early Childhood Education Programs Work: Better Outcomes for Children

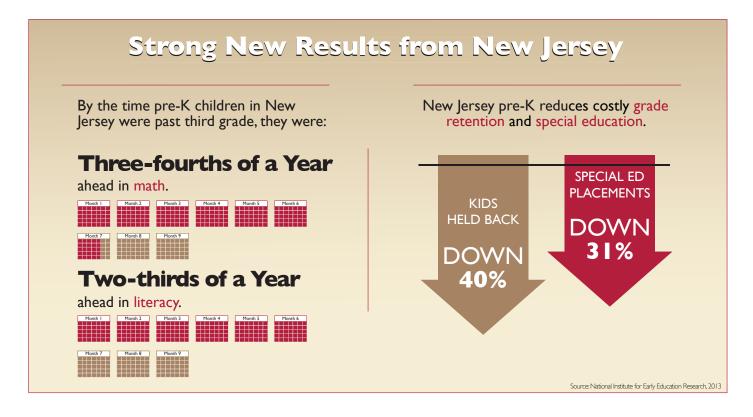
While trends in education reform come and go, research shows that there is a solution that is consistently proven over time. High-quality early childhood education can prepare children to start school ready to learn. It can improve student performance, boost high school graduation rates, deter youth from crime, and, by helping children develop healthy early exercise and good nutrition habits, even help reduce childhood obesity rates.

New Findings from New Jersey Prove Early Childhood Education Can Be Brought to Scale with Strong Results

By 4th or 5th grade, children who attended New Jersey's preschool program for two years were three-quarters of an academic year ahead in math and two-thirds of an academic year ahead in literacy compared to their peers who did not attend. Children who attended the preschools were also 40







percent less likely to be held back in school and 31 percent less likely to need special education services. There was no "fade out" of program effects: children who attended the New Jersey program significantly outperformed similar children who did not attend in kindergarten, in second grade, and now in 4th and 5th grades. The study is ongoing, so future impacts will also be tracked.

Long-term studies of model programs had already shown that high-quality early education can transform the lives of disadvantaged children. For example, studies of the Perry Preschool program that followed the participants over 40 years have found they were 44 percent more likely to graduate from high school, while those who did not attend were five times more likely to be chronic criminal offenders by age 27.7

The Chicago Child-Parent Centers took this approach to scale, having served over 100,000 children, with long-term results: children left out of the program were 70 percent more likely to be arrested for a violent crime by age 18 and 24 percent more likely to have been incarcerated as young adults than similar children not served. Participants, on the other hand, were 40 percent less likely to be placed in special education and, by age 20, were 29 percent more likely to have graduated from high school.⁸

The researchers studying the New Jersey preschool program state that their results are on par with initial results for the

Chicago Child-Parent Centers, so they expect, as the New Jersey children mature, to see strong high school graduation and crime prevention results, as well as economic benefits exceeding program costs. Meanwhile, the New Jersey program is reducing the substantial costs associated with special education and children repeating a grade.⁹

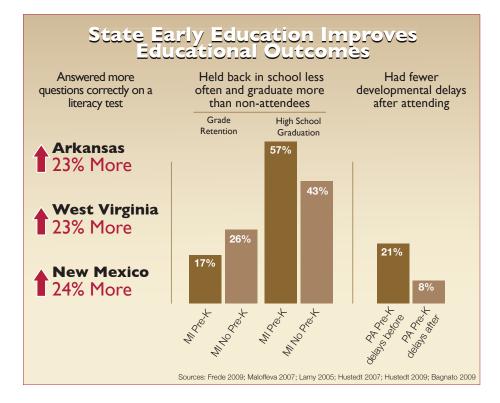
Studies in Other States and Cities

Studies of high-quality early childhood education programs in other states and localities also report benefits such as impressive gains on literacy, and reductions in the numbers of children needing special education services or being held back in school.

Tennessee: A rigorous study of Tennessee's pre-K program found that literacy results and overall academic improvements for children who attended were 50 percent greater than for those who did not attend.¹⁰

Michigan: While most state pre-K evaluations do not yet have results on children's school performance beyond the early elementary school years, an evaluation of Michigan's Great Start Readiness Program (GSRP) shows longer-term results. GSRP participation had a dramatic impact on reducing grade repetition: children who attended the program were 51 percent less likely to be held back a grade by 8th grade when compared to a similar group of children





who did not attend the program.¹¹ And children who attended the GSRP were 35 percent more likely to graduate from high school on time than a comparison group of children not in the program.¹²

Arkansas: An evaluation of the Arkansas Better Chance program found that children who attended pre-K developed an extra four months' worth of vocabulary knowledge, beyond the gains that would be expected as a child naturally ages. Pre-K attendance also resulted in 23 percent more correct answers on a literacy test and improved math scores. Researchers are following children for five years to evaluate the longer-term effects of the program.¹³

West Virginia: Over half of West Virginia's four-year-olds are enrolled in the voluntary West Virginia Universal Pre-K System. An evaluation of the program found that children made an extra three months of progress on their vocabulary development, answered 23 percent more items correctly on an early literacy test, and increased their average math scores, when compared to the progress that would normally be expected over the course of a year.¹⁴

New Mexico: New Mexico launched a pre-K program in 2005 that is already seeing strong results. Across the first three years of the initiative, participating children answered

an average of 24 percent more questions correctly on a literacy test. Significant impacts were found in math for all three years and in vocabulary for two of the three initial years.¹⁵

Pennsylvania: A recent evaluation of Pennsylvania's Pre-K Counts (PKC) program showed especially strong results for children who might otherwise be in special education during their K-12 years. For example, 21 percent of children were classified as developmentally delayed and qualified for early intervention services as they began PKC. By the end of PKC, only eight percent of children were classified as delayed. Similarly, the portion of three-year-old children at risk for problematic social and self-control behavior fell from 21.5 percent at the start of the program to 3.6 percent at the end of PKC.¹⁶

Promising local studies show that very high-quality programs produce even larger effects. A recent study of a very high-quality, universal pre-kindergarten program in the **Boston** Public Schools found that children who participated in the program had improvements in mathematics, literacy and language skills equivalent to seven months of additional learning by the end of the program, compared to children who did not attend. Both disadvantaged children and their more advantaged peers benefited from the program.¹⁷

A study of disadvantaged children in the **San Francisco Bay Area** who received high-quality pre-kindergarten for two years showed that the children actually outperformed more well-off children in reading by second grade: 61 percent of those attending the program for two years were proficient in reading, compared to 55 percent of students who did not attend the program (most of whom attended private preschool programs).¹⁸

Reducing Obesity

There is also emerging evidence that teaching young children healthier eating and exercise habits can contribute to reversing the epidemic of childhood obesity. A randomized controlled



DECLINES IN CHILDHOOD OBESITY: Data in Philadelphia, Mississippi and New York City indicate that innovative preschool efforts to improve early childhood nutrition and physical activity and to educate parents in each locality may be part of the solution to childhood obesity.

LOCALITY	CHILDHOOD OBESITY MEASURED	DECLINE IN ORESITY
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Philadelphia	Over a 4-year period, K-I2 children, overall obesity measured	5% decline
Mississippi	Over a 6-year period, K-5 children, overweight & obesity measured	13% decline
New York City Black Hispanic	Over a 4-year period, 5- to 6-year olds , obesity measured for all public-school children	7% decline 6% decline
White		24% decline

Source(s): Pennsylvania School District, 2012; Journal of the Mississippi State Medical Association, 2012; Centers for Disease Control and Prevention, 2012; New York City of Health and Mental Hygiene, 2012; Robert Wood Johnson Foundation, 2012.

study in **Chicago** demonstrated that working with preschoolaged children and their parents can reduce weight gain: children not in the program gained 16 percent more weight over the next two years than those receiving the program.¹⁹ In **New York City**, **Philadelphia** and **Mississippi**, schools improved the nutritional quality of the food served to children, increased their physical activity, and coached their parents on children's healthy nutrition and physical activity needs. As a result of these efforts, along with other broader reforms, rates of childhood obesity dropped 5 to 24 percent.²⁰

In sum, research demonstrates that high-quality early learning programs can help solve the serious problems—poor educational achievement, criminal behavior and obesity—that cause the majority of our young people to be ineligible for military service. Solving these problems will have additional positive social and economic consequences because succeeding in school and avoiding criminal involvement also opens the doors to success in college and careers, whether young people choose to serve in the military or not.

Moving America Forward: States Are Already Investing in High-Quality Early Education

States understand that quality early learning programs provide an extraordinary return on investment and 40 states and the District of Columbia have preschool programs.

Nationwide, the proportion of four-year-olds served in state preschool doubled over the past decade, growing from 14 percent in 2001-2002 to 28 percent in 2011-2012.²¹ Support

for quality programs from both Republican and Democratic policymakers demonstrates a commitment to high quality school readiness programs from both sides of the aisle. In 2013 alone, Republican and Democratic governors in Colorado, Michigan, Mississippi, New Mexico, New York, North Dakota, Pennsylvania and Virginia have proposed and/or signed into law expansions in quality early learning.²²

While significant progress has been made, access to preschool varies widely by state and most states fall well short of serving most of their preschool-aged children.²³ As of 2012:

- more than half of the states serve 30 percent or fewer of their four-year-olds: and
- another 10 states still have no state preschool programs.²⁴

Further, in 2011-2012, preschool enrollment stalled and state funding decreased significantly, due to lingering effects of the recession and the end of the additional American Recovery and Reinvestment Act (ARRA) funding.

Clearly, a top national and state priority must be to increase the number of children served in early education programs. However, it is equally important to deliver high-quality programs. The research is clear that high-quality programs deliver stronger results.

High-Quality Early Childhood Education Benefits Society

In its 2014 budget proposal, the Administration has proposed \$75 billion over 10 years for a state-federal partnership to



John W. "Bill" Libby, former Maine Adjutant General, reads to children at a prekindergarten center in Bangor, Maine, June 2010.

provide high-quality preschool programs to every low- and moderate-income four-year-old in the nation.²⁵ The proposal also includes a \$750 million competitive grant program, to help states build their capacity for implementing high-quality preschool and an initiative to expand access to high-quality child care for children from birth through age three. The child care initiative proposes a new competitive grant program for child care partnerships with Early Head Start, as well as an increase in Child Care and Development Block Grant (CCDBG) funds. A comprehensive system of high-quality care and education, from child care through preschool, will result in more children entering school prepared to succeed.

The new preschool initiative will allow states without preschool to establish high-quality programs, as New Jersey and others have done. States with preschool could increase the number of slots or increase the quality of their existing programs, or do some combination of each. The research shows that investing in high-quality preschool can result in substantial increases in graduation rates for more disadvantaged students.

Our projections of additional graduates conservatively assume there could be a 15 percent increase in graduation rates for low- and moderate-income children under 200 percent of the federal poverty level, if the state-federal partnership is implemented nationwide. We could have used Chicago's high-quality pre-kindergarten program's increased graduation rate of 29 percent, Perry Preschool's 44 percent,

or Michigan's statewide Great Start program's 35 percent. But, to be conservative, we used the lower Chicago figure and then cut it roughly in half.

Even with such a modest estimate, the 15 percent increase in graduation rates for these children would raise their graduation rates from 70 percent nationally to 81 percent. That would total nearly two million more graduates nationwide from the proposed ten-year increase in pre-kindergarten funding. That is almost as many individuals as are currently serving in active duty, National Guard, and Reserves.²⁶ (See Appendix I for the number of additional graduates for each state.)

Many people are understandably concerned about the cost of early childhood education programs in a time when budget cuts are the norm. But failing to make effective investments in children when they are very young means a

higher cost to society down the road. A child who drops out of school, uses drugs and becomes a career criminal costs society, on average, \$2.5 million.²⁷

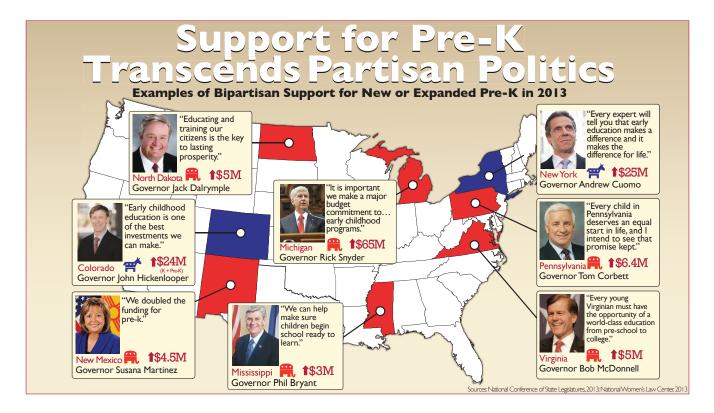
Early Education Quality Matters

Numerous research studies have documented the key characteristics of high-quality early learning programs, including:

- Highly skilled teachers with appropriate compensation;³⁰
- Comprehensive and age-appropriate curricula;³¹
- Strong family involvement and effective parent coaching;³²
- Higher staff-to-child ratios to ensure each child gets sufficient attention;³³
- Small, age-appropriate class sizes;³⁴ and
- Screening and referral services for developmental, health or behavior problems.³⁵

These are the key features of early learning programs that research indicates are essential for delivering good early education and care.





An independent analysis of the research studies shows that high-quality early learning programs cut crime, welfare and other societal costs so much that they produce average net benefits to society of \$15,000 for every child served.²⁸ These benefits result from outcomes such as schools avoiding the cost of giving children an extra year of education when they are held back, lower special education costs, fewer children in detention facilities and fewer adults in prison, and fewer direct expenses for victims of crime, as well as savings from lower welfare costs.

Using the \$15,000 net benefit analysis yields roughly \$150 billion in net benefits to society from the state-federal early education proposal, after subtracting costs.²⁹ Other estimates, based on the higher-quality programs, produce even greater financial benefits. (See Appendix I for state-by state benefits minus costs).

Conclusion

Our nation has prioritized investments that keep America's military the most technologically advanced in the world. But we will need educated, fit and moral individuals who are ready to serve in tomorrow's modern battlefields – sophisticated weapon systems alone cannot protect us. Many states are making solid progress in early education, states with both Republican and Democratic governors and legislatures. As retired admirals and generals, we know that early education, from birth to kindergarten entry, is essential for a strong America. This is not just an essential investment in a 21st century education system. It is an essential investment in our national security.

Even when you lowball the numbers on what this ten year investment in prekindergarten could produce, you get \$150 billion in net benefits and 2 million more young people graduating from high school. That will strengthen America.

Lieutenant General Norman R. Seip US Air Force (Ret.)



Appendix I. Projections

Benefits Minus Costs: Based on studies of more than 20 programs around the nation, the independent Washington State Institute for Public Policy determined that pre-kindergarten averages \$15,000 in net benefits (average benefits minus average costs) per child served, or **two dollars in net benefits for every dollar invested**. This is a conservative estimate; other estimates are much higher. Applying that analysis to the proposed \$75 billion to be spent over ten years to bring pre-kindergarten to scale for low- and moderate-income children nationwide produces \$150 billion in net benefits.

Additional Graduates: Chicago's high-quality pre-kindergarten program produced 29 percent more high school graduates, the Perry Preschool produced 44 percent more graduates, and the state program in Michigan increased graduation rates by 35 percent. A reasonable assumption might be that high-quality prekindergarten for low-income children could produce a 29 percent increase in graduation rates. But since not all low- and moderate-income children will be served, even when pre-kindergarten is expanded, and many programs may take time to deliver strong results, we simply cut that figure in half – to a 15 percent increase in graduation rates – in order to be conservative. Even at that modest rate, bringing pre-kindergarten to scale for low-income children in America would produce roughly 2 million new graduates from the proposed ten-year increase in pre-kindergarten funding. For our full methodology, see missionreadiness.org.

ESTIMATES OF NET ECONOMIC BENEFITS AND ADDITIONAL GRADUATES	POSSIBLE FEDERAL FUNDING (Rounded) nationally and by state for Pre-K over 10 yrs based on the proposed \$75 billion over ten years. (a)	BENEFITS MINUS COSTS (Rounded) realized from 10 years of funding (based on \$15,000 average net benefits per child served or \$2 net benefits per \$1 spent). (b)	in the state (c)	NEW HIGH SCHOOL GRADUATION RATE if it is 15% higher than before for low-income children	# OF ADDITIONAL GRADUATES OVER TEN YEARS (Rounded) among children < 200% of poverty (Nearly 2 million nationwide over 10 years)
UNITED STATES	\$75,000,000,000	\$150,000,000,000	70%	81%	1,947,860 / 10 years
Alabama	\$1,300,000,000	\$2,600,000,000	62%	71%	29,000
Alaska	\$170,000,000	\$340,000,000	56%	64%	3,500
Arizona	\$2,000,000,000	\$4,000,000,000	73%	84%	54,000
Arkansas	\$910,000,000	\$1,800,000,000	75%	86%	25,000
California	\$10,000,000,000	\$20,000,000,000	70%	81%	260,000
Colorado	\$1,100,000,000	\$2,300,000,000	62%	71%	26,000
Connecticut	\$510,000,000	\$1,000,000,000	62%	71%	12,000
Delaware	\$180,000,000	\$370,000,000	71%	82%	4,800
District of Columbia	\$190,00,000	\$380,000,000	58%	67%	4,100
Florida	\$4,500,000,000	\$8,900,000,000	60%	69%	99,000
Georgia	\$2,900,000,000	\$5,700,000,000	59%	68%	62,000
Hawaii	\$250,000,000	\$510,000,000	75%	86%	7,000
Idaho	\$480,000,000	\$960,000,000	NA	NA	NA
Illinois	\$2,900,000,000	\$5,900,000,000	75%	86%	82,000
Indiana	\$1,600,000,000	\$3,200,000,000	79%	90%*	44,000*
Iowa	\$670,000,000	\$1,300,000,000	78%	90%	19,000
Kansas	\$710,000,000	\$1,400,000,000	73%	84%	19,000
Kentucky	\$1,100,000,000	\$2,300,000,000	NA	NA	NA
Louisiana	\$1,300,000,000	\$2,600,000,000	64%	74%	31,000
Maine	\$250,000,000	\$500,000,000	73%	84%	6,700
Maryland	\$900,000,000	\$1,800,000,000	74%	85%	24,000
Massachusetts	\$910,000,000	\$1,800,000,000	70%	81%	23,000
Michigan	\$2,300,000,000	\$4,500,000,000	63%	72%	53,000



ESTIMATES OF NET ECONOMIC BENEFITS AND ADDITIONAL GRADUATES	POSSIBLE FEDERAL FUNDING (Rounded)	BENEFITS MINUS COSTS (Rounded)	CURRENT HIGH SCHOOL GRADUATION RATE	NEW HIGH SCHOOL GRADUATION RATE	# OF ADDITIONAL GRADUATES OVER TEN YEARS (Rounded)
	nationally and by state for Pre-K over 10 yrs based on the proposed \$75 billion over ten years. (a)	realized from 10 years of funding (based on \$15,000 average net benefits per child served or \$2 net benefits per \$1 spent). (b)		if it is 15% higher than before for low-income children	among children < 200% of poverty (Nearly 2 million nationwide over 10 years)
Minnesota	\$1,000,000,000	\$2,000,000,000	58%	67%	22,000
Mississippi	\$1,000,000,000	\$2,100,000,000	69%	79%	26,000
Missouri	\$1,400,000,000	\$2,900,000,000	74%	85%	39,000
Montana	\$240,000,000	\$480,000,000	71%	82%	6,300
Nebraska	\$440,000,000	\$880,000,000	78%	90%	13,000
Nevada	\$770,000,000	\$1,500,000,000	53%	61%	15,000
New Hampshire	\$170,000,000	\$340,000,000	72%	83%	4,500
New Jersey	\$1,400,000,000	\$2,800,000,000	71%	82%	37,000
New Mexico	\$680,000,000	\$1,400,000,000	56%	64%	14,000
New York	\$4,000,000,000	\$8,100,000,000	69%	79%	100,000
North Carolina	\$2,600,000,000	\$5,200,000,000	71%	82%	69,000
North Dakota	\$130,000,000	\$260,000,0000	76%	87%	3,600
Ohio	\$2,700,000,000	\$5,300,000,000	65%	75%	64,000
Oklahoma	\$1,100,000,000	\$2,100,000,000	NA	NA	NA
Oregon	\$920,000,000	\$1,800,000,000	61%	70%	21,000
Pennsylvania	\$2,400,000,000	\$4,800,000,000	71%	82%	63,000
Rhode Island	\$190,000,000	\$380,000,000	66%	76%	4,700
South Carolina	\$1,300,000,000	\$2,600,000,000	67%	77%	33,000
South Dakota	\$200,000,000	\$400,000,000	86%	90%*	2,000*
Tennessee	\$1,700,000,000	\$3,400,000,000	80%	90%*	41,000*
Texas	\$8,100,000,000	\$16,000,000,000	84%	90%*	120,000*
Utah	\$850,000,000	\$1,700,000,000	65%	75%	21,000
Vermont	\$97,000,000	\$190,000,000	77%	89%	2,800
Virginia	\$1,400,000,000	\$2,900,000,000	70%	81%	37,000
Washington	\$1,400,000,000	\$2,900,000,000	66%	76%	35,000
West Virginia	\$420,000,000	\$830,000,000	68%	78%	11,000
Wisconsin	\$1,200,000,000	\$2,400,000,000	74%	85%	33,000
Wyoming	\$130,000,000	\$250,000,000	66%	76%	3,100

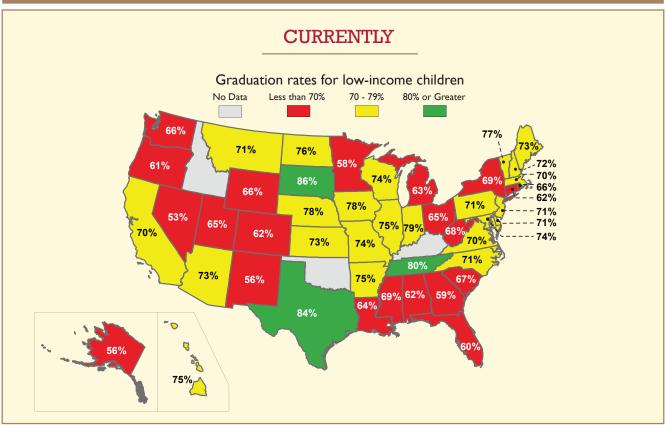
^{*}The increase in graduation rates was capped at 90% to be conservative.

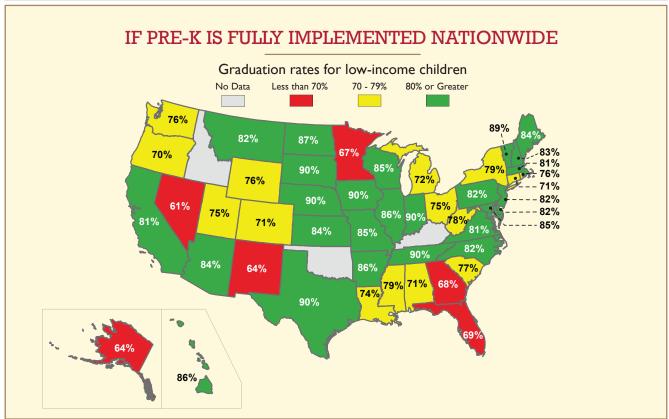
SEE MISSIONREADINESS.ORG FOR A DOCUMENT WITH THE FULL METHODOLOGY.
Sources: 36 a) Kids Count Data Center for data to project the percentage of 4-year olds under 200% of poverty in each state b) Washington State Institute for Public Policy, data on average net benefits of pre-K, and c) U.S. Department of Education, Ed Data Express, for graduation rates by state for children eligible for free or reduced price meals. See endnote 36 for full citations and links.



Changes in graduation rates if Pre-K is brought to scale for low-income children

(Assuming a 15 percent increase in graduation rates)







Endnotes

- 1 Gilroy, C. (March 3, 2009). Prepared statement of Dr. Curtis Gilroy, director of accession policy in the Office of the Under Secretary of Defense for Personnel & Readiness. Before the House Armed Services Personnel Subcommittee "Recruiting, Retention and End of Strength Overview."
- **2** U.S. Department of Education. (2012). *Provisional data file: SY 2010-11 four year regulatory adjusted cohort graduation rate.* Washington, DC: Author.
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