

High-Quality Early Care and Education

A KEY TO REDUCING FUTURE CRIME IN MICHIGAN



A Report by FIGHT CRIME: INVEST IN KIDS

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A Key to Reducing Future Crime in Michigan

Executive Summary

Early childhood care and education helps children get the right start in life, avoid future crime, and save taxpayers' money, but programs must be high quality to make a difference in kids' lives.

Early Education Cuts Crime

In addition to tough policing, prosecution and corrections, Michigan also needs to invest in programs that prevent kids from becoming criminals in the first place. As law enforcement leaders, we support effective investments that can make all Michigan communities safer places to live, work and raise a family. The research shows that early care and education is such an investment. For example:

- A long-term study of Michigan's Perry Preschool found that at-risk children left out of the high-quality program were five times more likely to be chronic offenders by age 27 than children who did attend.
- At-risk kids who did not participate in Chicago's Child-Parent Centers were 70 percent more likely to be arrested for a violent crime by age 18, according to a study published in the *Journal of the American Medical Association*.
- Early education can also improve education outcomes, such as the 50 percent greater overall gain in literacy from Tennessee's pre-kindergarten program.



High-Quality Early Learning Programs Save Money

Research shows that high-quality early care and education programs provide enormous societal benefits – nearly \$11 in benefits for every \$1 dollar invested, according to a long-term study of children who participated in Chicago's Child-Parent Centers. Of the \$11 in benefits, \$5 result from lower costs for crime and corrections.

These early care and education programs delivered impressive results because they were high-quality programs. Unfortunately, too many early care and education programs are not high quality.

Corrections Spending Outpaces Early Education Spending

Both the nation and Michigan spend more on corrections than on early care and education.

- Total state and federal corrections spending to house, feed, and provide 24-hour supervision of criminals, at \$58 billion in 2011, is more than double total 2010 state and federal early care and education spending, at \$26 billion.
- Michigan spends \$2.193 billion per year to house, feed and provide 24-hour supervision for its state criminals. In contrast, Michigan spent only a fraction as much — \$153.4 million — on early childhood education. Additional federal investments in early care and education in Michigan included \$242.5 million for Head Start and \$175.8 million for the Child Care and Development Block Grant.

Early Care and Education in Michigan

Currently, 34 percent of Michigan's 4-year-olds attend pre-kindergarten or Head Start. More children are served in child care programs, but not all programs are high quality. Michigan has taken important steps, however, to enhance the quality of early care and education programs. Great Start to Quality provides parents and communities with quality ratings and

information about the quality of specific programs. At the federal level, efforts are underway to improve the quality of the Federal Head Start program, but more quality improvements are still needed to help reach its full potential.

Law enforcement leaders across Michigan want to make sure more Michigan children receive high-quality care and education in their early years — the help they need to succeed in life and avoid later crime and violence. Federal early care and education programs are coming up for reauthorization, and law enforcement leaders urge Michigan's congressional delegation to look for ways to improve the quality of such programs. Law enforcement leaders also look forward to working with state and federal policymakers to maintain — and, where possible, increase — funding for early care and education programs, to both expand access to as well as increase the quality of the programs. We also call on state policymakers to continue efforts to build a strong state early childhood development and learning system for all Michigan's children, especially its most vulnerable.

High-Quality Early Care and Education

A Key to Reducing Future Crime in Michigan

Introduction

The law enforcement leaders of FIGHT CRIME: INVEST IN KIDS MICHIGAN are determined to see criminal offenders held accountable and dangerous criminals put behind bars. But those on the front lines in the fight against crime know that America's anti-crime arsenal contains no weapons more powerful than proven programs that keep kids from committing crimes in the first place. High-quality early care and education helps kids get the right start in life.

The first years of life are a critically important time in children's development. During this period, children's environments and relationships with the adults around them — first and foremost their parents — are vital to healthy development.¹ For a majority of young children today, early care and education programs are a part of their daily experience. Sixty-one percent of U. S. children under 5 attend early care and education programs on a regular basis.² And in Michigan, 69 percent of children under 6 have all available parents in the workforce.³ The learning and development children experience in child care or pre-kindergarten, and the caliber of the professionals who work with children in those programs, have an important influence on helping children start school with appropriate learning and social development skills. Early care and education programs must be high quality to ensure that their influence on young children is a positive one.

High-Quality Early Care and Education Cuts Crime

Research shows the crime reduction effects of high-quality early care and education.

Consider the evidence:

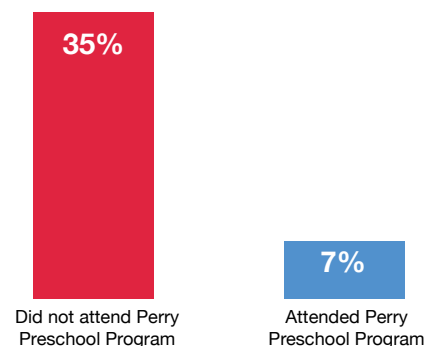
High/Scope Perry Preschool: The Perry Preschool Program is a high-quality, 1- to 2-year-long educational program considered

a model for early childhood education programs. The High/Scope Educational Research Foundation initiated a study of the Perry Preschool Program in Ypsilanti, Michigan in 1962. The Foundation randomly assigned one half of a group of at-risk, low-income 3- and 4-year-olds to attend the Perry Preschool Program and assigned the other half to a control group not receiving preschool. In 2004, the Foundation released the most recent findings of lifetime effects of the Perry Preschool Program.

By age 27, children who did not attend the program were five times more likely to become chronic offenders with five or more arrests.⁴ By age 40, those who did not attend the program were two times more likely to become chronic offenders with more than 10 arrests and 50 percent more likely to be arrested for violent crimes. Children left out of the program were four times more likely to be arrested for drug felonies by age 40, and seven times more likely to be arrested for possession of dangerous drugs.⁵

High-Quality Early Education Cuts Future Crime

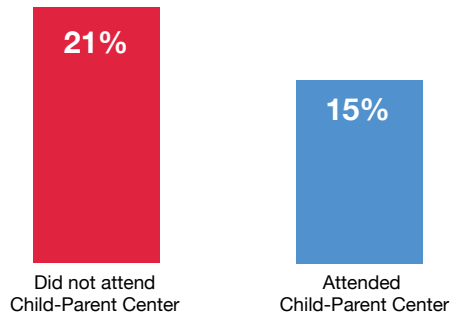
Chronic law breakers by age 27



Source: Schweinhart et al., 1993

Early Education Cuts Imprisonment

Individuals who did not participate in early education were 39 percent more likely to spend time in jail or prison between ages 18 and 26



Source: Reynolds, 2011

Chicago Child-Parent Centers: Chicago's federally funded Child-Parent Centers have served more than 100,000 3- and 4-year-olds since 1967. The program is a center-based early intervention program that provides educational and family services to economically disadvantaged children. A study comparing 989 children in the Child-Parent Centers to 550 similar children who were not in the program showed that children who did not participate in the program were 70 percent more likely to be arrested for a violent crime by age 18.⁶ Furthermore, by age 26, individuals who did not participate in the program were 27 percent more likely to have been arrested for a felony and 39 percent more likely to have spent time in jail or prison.⁷ This program will have prevented an estimated 33,000 crimes by the time the children who have attended the program thus far reach the age of 18.⁸

The research is clear: high-quality preschool programs can reduce crime.

High-Quality Early Education Saves Money

High-quality early care and education investments can provide an excellent return on investment for all Michiganders.

High/Scope Perry Preschool: The Perry Preschool Program cut crime, welfare and other costs so much that it returned to society more than \$16 for every \$1 invested (including more than \$11 in crime savings).⁹

Chicago Child-Parent Centers: The Chicago Child-Parent Centers program produced nearly \$11 in benefits to society for every dollar expended, with \$5 of these benefits due to reduced crime costs.¹⁰

The monetary benefits generated by the program from just the 100,000 children served in Chicago add up to \$3.7 billion.¹¹ In addition to these monetary returns, there are the immeasurable benefits from reducing victims' pain and suffering from crime.

Many leading economists, such as Arthur Rolnick, former Senior Vice President and Director of Research at the Federal Reserve Bank of Minneapolis, and James Heckman, Nobel Prize-winning economist, point out that funding high-quality early education is one of the best investments government can make.¹²

Corrections Spending Outpaces Early Education Spending

Despite strong evidence that high-quality early education can reduce future corrections costs in Michigan and nationally, spending on corrections far surpasses spending on early education. Some examples:

- Total state and federal corrections spending to house, feed and provide 24-hour supervision of criminals, at \$58 billion in 2011, is more than double total 2010 state and federal early care and education spending, at \$26 billion.¹³
- Michigan spends \$2.193 billion per year to house, feed and provide 24-hour supervision for its state criminals.¹⁴ In contrast, Michigan spent only a fraction as much — \$153.4 million — on early childhood education.¹⁵ Additional federal investments in early care and education in Michigan included \$242.5 million for Head Start, and \$175.8 million for the Child Care and Development Block Grant.¹⁶



Investing more in high-quality early education now can save Michigan and the nation in future corrections costs.

Michigan spends \$2.1 billion per year to house, feed and provide 24-hour supervision for its state criminals.

– National Association of State Budget Officers

High-Quality Early Care and Education Programs Help Children Succeed

In addition to crime prevention, high-quality early care and education programs also lead to better educational performance. In a national poll of kindergarten teachers, 9 out of 10 teachers agreed that substantially more children would succeed in school if all families had access to quality pre-kindergarten programs.¹⁷

Research shows that high-quality pre-k programs have positive effects on children's school readiness, helping at-risk or disadvantaged children start school ready to learn and succeed academically in later school years.¹⁸

- A rigorous study of pre-kindergarten in Tennessee found that children who attended had 50 percent greater overall gains in literacy than those who did not attend. In oral comprehension and picture vocabulary, pre-kindergarten participants made twice the gains of those students who were randomly assigned to a waitlist.¹⁹
- Compared to children who did not attend the Perry Preschool Program, by age 40, those who did attend the program were 44 percent more likely to graduate from high school.²⁰ Children who were *not* enrolled in the Perry Preschool Program were also twice as likely to be placed in special education classes.²¹
- Finally, children who attended the Chicago Child-Parent Center program were 29 percent more likely to graduate from high school. In contrast, children who were *not* in the Chicago Child-Parent Center program were 67 percent more likely to be held back in school and 71 percent more likely to be placed in special education classes.²²

Only High-Quality Programs Deliver Solid Results

Only high-quality early care and education programs have been shown to significantly reduce crime and enhance school success. Researchers have found that high-quality early care and education programs have several key characteristics, including:

- Highly skilled teachers with appropriate compensation;²³
- Comprehensive and age-appropriate curricula;²⁴
- Strong family involvement and effective parent coaching;²⁵
- Low child-to-staff ratios to ensure each child gets sufficient attention;²⁶
- Small, age-appropriate class sizes;²⁷ and
- Screening and referral services for developmental, health or behavior problems.²⁸

A recent analysis of early education programs in 11 states (Kentucky, Georgia, Texas, Ohio, Illinois, California, New Jersey, New York, Massachusetts, Washington and Wisconsin) offers further evidence that programs must be high-quality in order to produce positive effects on children's school readiness skills. When pre-k teachers provided a high-quality classroom experience by demonstrating more responsive and sensitive interactions with children in their classrooms, children showed better social adjustment and fewer behavior problems than did children in moderate- or low-quality classrooms.²⁹ And when pre-k teachers provided moderate- to high-quality instruction in their classrooms, children showed more advanced academic and language skills than children in low-quality classrooms.³⁰

Low-Quality Child Care Programs Pose a Risk to Children

While high-quality early care and education can markedly reduce the risk of school failure and other negative outcomes, low-quality care can actually increase the risk of negative outcomes.³¹ A recent study of early education programs in 11 states found that children in low-quality classrooms did not show any gains in academic skills or reductions in behavior problems.³² In another study, children showed potentially harmful stress levels while attending low-quality child care. Researchers found that these elevated stress levels were associated with care characterized by harsh and inconsistent treatment by their caregivers.³³ Other studies

have found that children in lower-quality care were more likely to display behavior problems.³⁴ Children displaying serious problem behaviors early in life have a greater likelihood of delinquency, with an increased risk of crime as adults.³⁵

From a law enforcement perspective, the early care and education quality issue is especially important because it strikes hardest at those most vulnerable — at-risk children. When we shortchange the quality of their care, we increase the risk they will grow up to pose a threat to the rest of us.

The Importance of Quality Teachers

A crucial area where many early care and education programs could improve is in hiring better qualified teachers. Effective teachers are essential to providing high-quality early care and education, yet a recent report shows that a majority of early childhood educators themselves have low levels of education and training, which makes it more difficult to provide quality early care and education. In general, teachers with more education and training in early childhood education are more effective than those with minimal education and training.³⁶ According to a recent Government Accountability Office report, 72 percent of early care and education staff nationally had less than an associate's degree (generally a two-year degree).³⁷

To attract and retain well-qualified teachers, early care and education programs need to provide adequate compensation, but too many early care and education teachers are paid low wages. The average annual income for child care workers in Michigan was \$21,790, and preschool teachers averaged \$33,430 annually.³⁸ Further, child care workers and preschool teachers are paid low wages compared to other occupations: letter carriers, construction laborers, administrative assistants and bus drivers all earn more than preschool teachers in Michigan. Janitors and hairdressers also have better wage prospects than Michigan child care workers.³⁹ (See table, above, for wage comparisons.)

That is why law enforcement leaders support efforts to hire and retain skilled early childhood teachers and improve the quality of early care and education programs for children in Michigan and nationwide, so that young children succeed in school and avoid lives of crime.

Child Care and Preschool Teachers are Paid Low Wages Compared to Other Occupations

Occupation	Michigan		National	
	Median Hourly Wage	Annual Mean Wage	Median Hourly Wage	Annual Mean Wage
Postal Service Mail Carriers	\$26.69	\$51,220	\$26.52	\$51,390
Construction Laborers	\$16.56	\$36,370	\$14.30	\$34,170
Secretaries and Admin. Assistants	\$15.76	\$33,280	\$15.32	\$33,020
City Bus Drivers	\$15.62	\$32,220	\$17.17	\$37,440
Preschool Teachers	\$14.98	\$33,430	\$12.80	\$30,150
Janitors	\$10.78	\$24,560	\$10.75	\$24,840
Hairdressers	\$10.24	\$24,710	\$10.85	\$26,460
Child Care Workers	\$9.53	\$21,790	\$9.34	\$21,320
Parking Lot Attendants	\$9.06	\$20,090	\$9.53	\$21,600

Source: US Bureau of Labor Statistics, 2011

Federal Early Care and Education Programs

There are several federal early care and education initiatives which serve children in Michigan. Federally funded Head Start, Early Head Start and child care programs have an important role to play in helping to promote the quality of early care and education in Michigan.

Head Start and Early Head Start

Head Start and Early Head Start together provide comprehensive health, support, and educational services for young children in low-income families. Children in Head Start programs, which serve children ages 3 to 5, receive comprehensive services, such as high-quality early education, health, nutrition and social and emotional development components. Head Start also stresses parent involvement. Head Start services help children enter kindergarten better prepared and help prevent them from falling behind other students, helping to close the achievement gap for at-risk students as they enter school. According to the non-partisan Congressional Research Service, less than 30 percent of U.S. 3- and 4-year-olds in poverty were served by Head Start in 2009, and only 2 percent of eligible children under age 3 were served in Early Head Start.⁴²

Early Head Start (EHS) was created in response to research suggesting the developmental importance of the first three years in a child's life. Established in 1994 as part of the federally funded Head Start program, EHS serves both pregnant women and children birth to age 3, providing guidance, information, parenting support and direct services. EHS provides services through center-based, home-based and combination program options.

A report released in 2010 raised some questions about the effectiveness of Head Start, finding that few benefits were sustained to the end of first grade.⁴³ However, that evaluation was conducted for children who attended Head Start in 2003, before several meaningful improvements in Head Start program quality were made.⁴⁴ Signed into law by President George W. Bush and passed with overwhelming bipartisan support, the 2007 reauthorization of Head Start and Early Head Start contained important quality improvements. The Improving Head Start for School Readiness Act increased teacher qualification standards, specifically associate's degrees for all teachers and bachelor's degrees for 50 percent of all lead teachers in Head Start classrooms, setting aside 40 percent of new Head Start

funds for quality enhancements such as scholarships and salary increases for teachers, and requiring at least 15 hours of annual in-service training for teachers.⁴⁵ In 2011, another key quality improvement from the 2007 reauthorization was implemented, requiring lower-performing Head Start local programs to "re-compete" for federal funding — that is, to re-apply on a competitive basis with other early care and education providers, instead of receiving an automatic grant renewal.

These important improvements to Head Start are likely to improve the quality of programs. Requiring lower-performing programs to compete with other potential program operators to receive Head Start funding is expected to remove ineffective programs and identify new local grantees through a competitive process to operate Head Start programs effectively. Future evaluations should study the program's impact on children enrolled in the program after these important reforms have been put in place. These ongoing efforts to improve the quality of Head Start will help it fully realize its promise of high-quality early learning for at-risk children.

Child Care and Development Block Grant

The Child Care and Development Block Grant (CCDBG) is the principal source of federal funding for child care assistance. Though the system was designed to help all eligible children by providing subsidies to pay for part or all of the cost of child care, inadequate funding allows only a small percent of eligible children to be served. Nationally, only one in six eligible children are receiving CCDBG subsidies.⁴⁶

Since child care assistance is designed to help parents afford child care programs available in the local child care market, the quality of programs is determined by what is offered by local child care centers and family child care homes. Program quality is difficult to determine if local data are not available, and access to high-quality programs can vary widely from community to community. While a majority of child care programs in Michigan and nationwide are subject to state licensing and regulation, these licensing standards generally help ensure basic health and safety, but do not require that programs be high in quality.⁴⁷ CCDBG funding includes only a small portion of funds to promote quality in local programs.⁴⁸

Recognizing the current challenges to providing high-quality early care and education, state and federal policymakers have launched several new initiatives to promote improvements in program quality.

Evidence-Based Teacher Training

One important arena for improving the quality of early care and education programs is through teachers. Ensuring that early education teachers are skilled and provide sensitive care is a key component of providing high-quality programs to young children.

In the last decade, more research has emerged on evidence-based approaches for teacher training. For example, Robert Pianta and colleagues have developed well-researched and validated observational training systems for teachers.⁴⁰ This approach uses the CLASS (Classroom Assessment Scoring System), an observational measure of teacher-student interactions, along with MyTeachingPartner, a web-based resource which is used to provide feedback and consultation to teachers.⁴¹ This training approach uses standardized methods to observe and assess teachers' interactions with students, and provides feedback to teachers to help them modify and improve their teaching practices.

Federal Initiatives to Improve Early Learning Quality

Several new federal initiatives designed to enhance the quality of early learning have been developed in recent years.

The Race to the Top—Early Learning Challenge competition, launched in 2011 and now in its second round, can help states significantly improve the quality of their early learning systems. In 2012, the U.S. Department of Education awarded competitive grants to nine states to (1) increase the number of low-income and disadvantaged kids enrolled in high-quality early learning programs; (2) design and implement a system of high-quality programs and services; and (3) improve the use of assessments to conform with early childhood standards.⁴⁹ Thirty-seven states and territories submitted applications for the program. While Michigan did not receive a grant in the first or second round of awards, continued funding for this program may subsequently allow the state to apply for and be awarded funding to help the state strengthen the quality of early learning and move toward a more comprehensive system of early learning for Michigan's children.

Pathways and Partnerships for Child Care Excellence is an initiative developed by the Office of Child Care within the U.S. Department of Health and Human Services to help ensure access to high-quality child care for children in low-income families. Features of this initiative include redesigned technical assistance to states, improved data collection on child care quality activities and quality outcomes, support for professional development for child care professionals, strengthened accountability in the use of child care assistance funds, and working with the states to help strengthen state child care licensing systems.⁵⁰



State Initiatives: Quality Rating Improvement Systems

Quality Rating and Improvement Systems (QRIS) have been created in many states around the nation, including Michigan, as a system-level approach to promoting quality in early care and education programs statewide. QRIS's provide a rating

of the quality of an early care and education program and are characterized by five key features:

- Provides quality standards as a basis for rating and comparing early care and education programs;
- Provides a system for monitoring improvements in the quality of programs;
- Provides a way to disseminate information about the quality of programs to parents and the public;
- Offers a process to improve programs, including providing technical assistance and making training available to providers; and
- Offers financial incentives to providers to improve their program quality.⁵¹

At least 25 states have implemented a statewide QRIS, and most others are developing their systems.⁵² Most state QRIS are in the early stages of evaluation, so more evidence is expected in the coming years. The evaluation evidence on QRIS shows initial results in three areas:

1. Different rating levels can measure meaningful differences in quality. Many states are conducting evaluations to assess whether different QRIS rating levels reflect

valid differences in the quality of programs. Studies in North Carolina, Oklahoma, Pennsylvania, Kentucky and Indiana have shown that the different rating levels do reflect real differences in the quality of programs.⁵³ Many studies are underway in additional states to validate QRIS rating levels.

2. QRIS can help programs improve their quality over time. Several evaluations have examined whether early care and education programs improved their quality over time after participating in a QRIS. A recent evaluation in Washington state offers strong evidence that QRIS participation can help programs to improve their quality.⁵⁴ This evaluation used a randomized controlled trial and offers the strongest evidence to date that QRIS quality improvement activities can improve the quality of local

programs. In a rigorous study of Washington's QRIS, *Seeds to Success*, researchers randomly assigned a group of early learning providers to receive coaching, quality improvement grants and funds for professional development activities, and a control group of providers to receive only professional development funds. Providers who received coaching and quality improvement funds had significantly higher levels of observed quality of the early learning and care they provided than those in the control group at a six-month follow-up.⁵⁵

Additional evaluation studies in five different states (Colorado, Oklahoma, Pennsylvania, Tennessee and Indiana) showed that programs participating in the QRIS improved their quality over time, but these studies had some limitations in their designs and could not show that QRIS participation itself had caused the increases in quality.⁵⁶

3. Higher QRIS-rated programs can produce better outcomes for children.

A separate set of evaluation studies have measured the impact of QRIS on children's individual outcomes, as opposed to their overall effects on programs.⁵⁷ These studies examined whether children in programs with higher QRIS rating levels have better cognitive, social, or behavioral outcomes than children in lower-rated programs. An evaluation of Missouri's QRIS found significant gains in children's social and behavioral skills as a result of child care providers' participation in the rating system.⁵⁸ Children in high-quality programs (rated as 4- or 5-star programs) showed significantly greater gains than children in low-quality programs (rated as 1- or 2-star programs).⁵⁹ Missouri's QRIS evaluation found similar results for children in poverty, with poor children in higher-quality programs showing significantly greater gains in social and behavioral skills, motivation and vocabulary than poor children in lower-quality programs.⁶⁰

Indiana's QRIS evaluation found evidence that preschool-aged children in higher-rated programs displayed fewer anxiety and withdrawal behaviors than children in lower-

Fast Facts on Early Care and Education in Michigan

- There are over 580,000 children under age 5 in Michigan.⁷⁵
- Sixty-nine percent of children under age 6 in Michigan have all parents (one parent in single-parent families, and both in two-parent families) in the workforce. Most of these children spend time in some form of non-parental child care each week, in child care centers, family child care homes, with nannies or in preschool programs.⁷⁶
- Michigan has child care licensing standards in place to help ensure the basic health and safety of children in licensed child care programs. With the implementation of Great Start to Quality, the state has taken important initial steps to set program standards for quality for the state's early care and education programs.⁷⁷

rated programs, but they did not find effects in other literacy, math, or social domains.⁶¹ Some preliminary evidence from a pilot study of Minnesota's QRIS found mixed results, with some gains and also some poorer performance in different areas of children's development for children in higher-rated programs compared to those in lower-rated programs.⁶² The state plans to use the results of the pilot study to continue refining the quality levels in Minnesota's rating system.

Another innovative approach that has not yet been evaluated is worth special notice: North Carolina has tied receipt of child care subsidies to a program's star rating level, allowing only higher-rated programs to receive child care subsidies.⁶³ If this proves to be effective in North Carolina, this approach could help QRIS to be an even more effective tool for continuous quality improvement.

The evaluation findings offer good initial evidence on the

potential of QRIS for improving the quality of programs and for having positive effects on children. The data-driven nature of QRIS allows states to use their results to regularly refine their rating systems to better reflect differences in quality. Effective rating systems can also help incentivize early care and education providers to improve their quality, and help states identify where additional investments in quality are needed. QRIS is an important tool for states to assess the quality of early education programs and to improve the quality of programs over time.

Early Care and Education in Michigan

Michigan provides early care and education through several different federal and state initiatives:

- The Great Start School Readiness Program (GSRP) provides pre-kindergarten services for 4-year-olds, serving 22,067 children during the 2010 - 2011 school year. This program meets 7 of the 10 quality benchmarks established by the National Institute for Early Education Research.⁶⁴ An evaluation of the pre-k program which followed students through their high school years found that GSRP participants were 35 percent more likely to graduate from high school on time than a comparison group of children not in the program.⁶⁵
- The federally funded Head Start program serves over 34,000 Michigan children.⁶⁶
- The Child Care and Development Block Grant serves 52,600 Michigan children.⁶⁷

Currently, 34 percent of Michigan's 4-year-olds attend pre-kindergarten or Head Start.⁶⁸ Some others are served by child care programs of varying quality.

Michigan's Initiatives to Improve Quality

Michigan has launched several initiatives to help improve the quality of child care and early education for young children in the state.

Michigan, along with many other states, has developed a Quality Rating Improvement System (QRIS), which helps parents identify quality child care programs and helps programs improve their quality. (See page 6 for additional information on QRIS.) Michigan's QRIS, Great Start to Quality, was launched statewide in October 2011. Great Start to Quality has five levels representing different tiers

of quality for programs.⁶⁹

Quality Rating and Improvement Systems like Great Start to Quality are an important tool for states to encourage local programs to improve the quality of their services. To continue strengthening quality in early care and education programs in the state, Michigan can encourage even more providers to participate in the rating system, and continue to use the data gathered on program quality in local programs to continue raising the quality bar over time within Great Start to Quality.

Conclusion

The 365 police chiefs, sheriffs, district attorneys and violence survivors of FIGHT CRIME: INVEST IN KIDS MICHIGAN recognize that high-quality early care and education programs are among the most powerful weapons to prevent crime and violence and help kids get the right start in life.

Research confirms what law enforcement professionals know from experience: getting the right start in life is crucial. Studies show that being enrolled in a high-quality early care and education program greatly reduces the likelihood that at-risk kids will engage in criminal behavior as adults. But too few children have access to high-quality programs.

The law enforcement leaders and crime survivors of FIGHT CRIME: INVEST IN KIDS look forward to working with Michigan's state and federal policymakers to strengthen the quality of early care and education programs, and to protect and increase funding for such programs in order to ensure more children have access to high-quality early care and education services. Building a strong early childhood development and learning system for all Michigan's children, especially its most vulnerable, is an investment that will make all Michiganders safer.

Endnotes

- 1 Shonkoff, J.P., & Phillips, D.A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.
- 2 Based on 2008 Survey of Income and Program Participation data. U.S. Census Bureau. (2010). *Who's minding the kids? Child care arrangements: Spring 2010 – Table 1B*. Washington, DC: Author. Retrieved on May 14, 2012 from <http://www.census.gov/hhes/childcare/data/sipp/2010/tables.html>
- 3 Based on 2008-2010 American Community Survey data from the U.S. Census Bureau. Annie E. Casey Foundation. (2011, October). *KIDS COUNT data center*. Baltimore, MD: Author. Retrieved on June 20, 2012 from <http://datacenter.kidscount.org/data/acrossstates/Rankings.aspx?ind=5057>
- 4 Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry Preschool study through age 27*. Ypsilanti, MI: High/Scope Press.
- 5 Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfield, C.R., & Nores, M. (2005). *Lifetime Effects: The High/Scope Perry Preschool study through age 40*. Ypsilanti, MI: High/Scope Educational Research Foundation.
- 6 Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest. *Journal of the American Medical Association*, 285, 2339-2380.
- 7 Reynolds, A. J., Temple, J. A., Ou, S.R., Arteaga, I.A., & White, B.A.B. (2011). School-based early childhood education and age-28 well-being: Effects by timing, dosage, and subgroups. *Science*, DOI:10.1126/science.1203618. Published June 9, 2011 online at <http://www.sciencemag.org/content/early/2011/06/08/science.1203618>
- 8 Reynolds, A. J. (2001, February 9). *Chicago Child Parent Centers linked to juvenile crime prevention*. Speech given at FIGHT CRIME: INVEST IN KIDS press conference in Washington, DC.
- 9 Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfield, C.R., & Nores, M. (2005). *Lifetime effects: The High/Scope Perry Preschool study through age 40*. Ypsilanti, MI: High/Scope Press.
- 10 Reynolds, A.J., Temple, J.A., White, B.A., Ou, S.R., & Robertson, D.L. (2011). Age 26 cost-benefit analysis of the Child-Parent Center Early Education Program. *Child Development*, 82(1), pp. 379-404.
- 11 This projection is based on the latest projection of CPC cost benefit results applied to an earlier projection of what the savings from all kids served up to that point would mean for Chicago. For the most recent cost-benefit analysis see: Reynolds, A.J., & Temple, J.A. (January 20, 2006). *Prevention and cost-effectiveness in early intervention: A 20-year follow-up of a Child Parent cohort*. McEvoy Lecture Series on Early Childhood and Public Policy, Humphrey Institute of Public Affairs, University of Minnesota. For the earlier projection of savings for all of Chicago see: Reynolds, A.J., et al. (June 18, 2001). Cost benefit analysis of the Title 1 Chicago Child-Parent Center program executive summary. Handed out to congressional staffers and other participants at the American Youth Policy Forum briefing on Capitol Hill.
- 12 Rolnick, A., et al. (2003). calculated an investment return of 16 percent by estimating the time periods in which costs and benefits in constant dollars were paid or received by Perry participants and society. For the rate of return on High/Scope Perry Preschool, see: Rolnick, A., & Grunewald, R. (2003). *Early childhood development: Economic development with a high public return*. Retrieved on May 17, 2012 from <http://www.minneapolisfed.org/pubs/fedgaz/03-03/earlychild.cfm>; Letter from James J. Heckman to the National Commission on Fiscal Responsibility and Budget Reform. (September 2010). Retrieved May 17, 2012 from <http://www.heckmanequation.org/content/resource/letter-national-commission-fiscal-responsibility-and-reform>
- 13 Federal early care and education investments, based on Fiscal Year 2010 funding levels, include: Head Start funding (\$7.234 billion), the federal portions of funding for the Child Care and Development Fund (\$7.189 billion), the federal portions of Temporary Assistance to Needy Families spent on child care (\$1.325 billion), and the portion of Title I funds of Elementary and Secondary Education Act allocated to early care and education teacher salaries (an estimated \$300 million, according to the Government Accountability Office). State early care and education funding for all 50 states includes state pre-k and state Head Start spending (\$5.637 billion, comprised predominantly of state pre-k spending, \$5.492 billion, plus \$145 million in state Head Start spending), CCDF state spending (via state match and maintenance of effort funds, \$2.283 billion), and TANF state child care spending (via maintenance of effort funds, \$1.750 billion). Federal and state corrections spending (\$6.185 billion) includes Fiscal Year 2010 Federal prison spending, and state corrections spending (\$51.053 billion) including Fiscal Year 2010 state spending from general fund, federal funds, other state funds and bonds. Administration for Children and Families. (2011). *FY 2010 CCDF All Expenditures By State-Categorical Summary*. Retrieved on June 19, 2012 from http://www.acf.hhs.gov/programs/ccb/data/expenditures/10acf696/exp_categorical.htm; Administration for Children and Families. (2011). *FY 2010 Final CCDF Allocation (Including Reallotted Funds)*. Retrieved on June 19, 2012 from http://www.acf.hhs.gov/programs/ccb/law/allocations/current/state2010/final_allocations_2010.htm Administration for Children and Families. (2010). *Head Start Program Fact Sheet, Fiscal Year 2009 state data*. Retrieved on June 19, 2012 from <http://www.acf.hhs.gov/programs/ohs/about/fy2010.html>. Does not include tribal or migrant Head Start programs; Barnett, W.S., Carolan, M. E., Fitzgerald, J., & Squires, J.H. (2011). *The state of preschool 2011 – State preschool yearbook*. New Brunswick, NJ: Rutgers University, National Institute for Early Childhood Research; U.S. Government Accountability Office. (2012, February). *Early Child Care and Education: HHS and Education are taking steps to improve workforce data and enhance worker quality*. (GAO-12-248). Washington, DC: Author; U.S. Department of Justice. (2012). *Federal Prison Systems (BOP)*. Retrieved on January 23, 2013 from <http://www.justice.gov/jmd/2012summary/pdf/fy12-bop-bud-summary.pdf>; National Association of State Budget Officers (2012). *State Expenditure Report*. Retrieved January 23, 2013 from http://www.nasbo.org/sites/default/files/State%20Expenditure%20Report_1.pdf. Table 32. Capital Inclusive.
- 14 National Association of State Budget Officers (2012). *State Expenditure Report*. Retrieved January 23, 2013 from http://www.nasbo.org/sites/default/files/State%20Expenditure%20Report_1.pdf. Table 32. Capital Inclusive. Includes spending from general fund, federal funds, other state funds and bonds.
- 15 Barnett, W.S., Carolan, M. E., Fitzgerald, J., & Squires, J.H. (2011). *The state of preschool 2011 – State preschool yearbook*. New Brunswick, NJ: Rutgers University, National Institute for Early Childhood Research [state pre-k + state Head Start]; Administration for Children and Families. (2011). *FY 2010 CCDF Expenditure Data*. Retrieved on June 22, 2012 from http://www.acf.hhs.gov/programs/ccb/data/expenditures/10acf696/exp_categorical.htm [CCDF state match and state MOE]; Center on Law and Social Policy (2012). *Child Care Assistance State Profile, Michigan*. Retrieved on June 26, 2012 from http://www.clasp.org/admin/site/publications_states/files/2010-Child-Care-Assistance-Profile-Michigan.pdf [state TANF MOE spent on child care in excess of CCDBG MOE]
- 16 Administration for Children and Families. (2011). *FY 2010 CCDF State Expenditure Data*. Retrieved on June 26, 2012 from http://www.acf.hhs.gov/programs/ccb/data/expenditures/10acf696/exp_categorical.htm includes discretionary, ARRA discretionary, mandatory and federal match expenditures; Administration for Children and Families. (2010). *Head Start Program Fact Sheet, Fiscal Year 2009 state data. Allocations*. Retrieved on May 14, 2012 from <http://www.acf.hhs.gov/programs/ohs/about/fy2010.html>. Does not include tribal or migrant Head Start programs.
- 17 Mason-Dixon Polling and Research. (2004, August). *National kindergarten teacher survey*. Washington, DC: Fight Crime: Invest in Kids.
- 18 Mead, S. (2004). *National pre-k strategy unveiled*. Washington, D.C.: Progressive Policy Institute.
- 19 Lipsey, M.W., Farran, D.C., Bilbrey, C., Hofer, K.G., & Dong, N. (April 2011). *Initial results of the evaluation of the Tennessee Voluntary Pre-Kindergarten Program*. Nashville, TN: Peabody Research Institute, Vanderbilt University and Tennessee Department of Education.
- 20 Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfield, C.R., & Nores, M. (2005). *Lifetime effects: The High/Scope Perry Preschool study through age 40*. Ypsilanti, MI: High/Scope Press.
- 21 Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry Preschool study through age 27*. Ypsilanti, MI: High/Scope Press.
- 22 Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest. *Journal of the American Medical Association*, 285(12), 2339-2380.
- 23 Research shows that having skilled, capable early childhood teachers and caregivers is essential to early childhood program quality. Stimulating and sensitive teachers provide higher-quality learning environments, which lead to improved cognitive and social outcomes for young children. Shonkoff, J.P. & Phillips, D.A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.
- 24 Katz, L. (1999). *Curriculum disputes in early childhood education*. Champaign, IL: Clearinghouse on Early Education and Parenting. Retrieved on May 16, 2012 from <http://ceep.crc.uiuc.edu/ecearchive/digests/1999/katz99b.html>; Goffin, S. G., & Wilson, C. (2001). *Curriculum models and early childhood education: Appraising the relationship* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
- 25 Some examples of a strong parent involvement and parent coaching approaches provided along with early education services include the home visits in the High/Scope Perry Preschool and Syracuse University Family Development programs, and the intensive parent coaching in Chicago Child-Parent Centers. Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry Preschool study through age 27*. Ypsilanti, MI: High/Scope Press. See also D. R. Powell (Ed.) (1988). *Parent education as early childhood intervention: Emerging directions in theory, research, and practice* (pp. 79-104). Norwood, NJ: Ablex Publishing.
- 26 For preschool classrooms, the child-to-staff ratio should be not more than 10 children per teacher. In early learning settings for infants, the child-staff ratio should be not more than three children per teacher, and for toddlers, not more than four children per teacher. American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education (2002). *Caring for our children: National health and safety performance standards: Guidelines for out-of-home child care programs, 2nd edition*. Elk Grove Village, IL: American Academy of Pediatrics and Washington, DC: American Public Health Association.
- 27 Barnett, W.S., Carolan, M. E., Fitzgerald, J., & Squires, J.H. (2011). *The state of preschool 2011 – State preschool yearbook*. New Brunswick, NJ: Rutgers University, National Institute for Early Childhood Research.
- 28 Barnett, W.S., Carolan, M. E., Fitzgerald, J., & Squires, J.H. (2011). *The state of preschool 2011 – State preschool yearbook*. New Brunswick, NJ: Rutgers University, National Institute for Early Childhood Research.
- 29 Pinto-Martin, J. A., Dunkle, M., Earls, M., Fliedner, D., & Landes, C. (2005). Developmental stages of developmental screening: Steps to implementation of a successful program. *American Journal of Public Health*, 95(11): 1928-1932; When pre-k teachers provided a high-quality classroom experience by being more responsive and sensitive, children showed better social adjustment and fewer behavior problems than did children in moderate-or low-quality classrooms. And when pre-k teachers provided moderate- to high-quality instruction in their classrooms, children showed more advanced academic and language skills than children in low-quality classrooms. Peisner-Feinberg, E.S., Burchinal, M.R., Clifford, R.M., Yazejian, N., Culklin, M.L., Zelazo, J., Howes, C., Byler, P., Kagan, S.L., & Rostici, J. (1999). *The children of the cost, quality, and outcomes study go to school*. Retrieved on May 17, 2012 from <http://www.fpg.unc.edu/resources/children-cost-quality-and-outcomes-study-go-school-executive-summary>; Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Childhood Research Quarterly*, 25, 166-176; Goffin, S.G. (2010). *NCRECE in focus: Increasing knowledge in early childhood*. Charlottesville, VA: University of Virginia, National Center for Research on Early Childhood Education.
- 30 Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Childhood Research Quarterly*, 25, 166-176; Goffin, S.G. (2010). *NCRECE in focus: Increasing knowledge in early childhood*. Charlottesville, VA: University of Virginia, National Center for Research on Early Childhood Education.
- 31 Peisner-Feinberg, E.S., Burchinal, M.R., Clifford, R.M., Yazejian, N., Culklin, M.L., Zelazo, J., et al. (1999). *The children of the cost, quality, and outcomes study go to school*. Retrieved on May 17, 2012 from <http://www.fpg.unc.edu/resources/children-cost-quality-and-outcomes-study-go-school-executive-summary>
- 32 Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs.

Early Childhood Research Quarterly, 25, 166-176; Goffin, S.G. (2010). *NCRECE in focus: Increasing knowledge in early childhood*. Charlottesville, VA: University of Virginia, National Center for Research on Early Childhood Education.

33 Gunnar, M.R., Kryzer, E., Ryzin, M.J., & Phillips, D.A. (2010). The rise in cortisol in family day care: associations with aspects of care quality, child behavior, and child sex. *Child Development*, 81(3), 851-869; Gunnar, M., Kryzer, E., Van Ryzin, M., & Phillips, D. (In press). The import of cortisol rise at child care differs as a function of behavioral inhibition. *Developmental Psychology*. Cited in Phillips, D. (2010). *10 years post – Neurons to neighborhoods: What's at stake and what matters in child care*. Keynote address at the celebration of the 20th anniversary of CCDBG, October 19, 2010, Washington, DC.

34 Peisner-Feinberg, E.S., & Burchinal, M.R. (1997). Relations between pre-school children's child-care experiences and concurrent development: The cost, quality and outcomes study. *Merrill-Palmer Quarterly*, 43, 451-477; Hausfather, A., Toharia, A., LaRoche, C., & Engelsman, F. (1997). Effects of age of entry, day-care quality, and family characteristics on preschool behavior. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 38, 441-448. Cited in Vandell, D.L. & Wolfe, B. (n.d.). *Child care quality: Does it matter and does it need to be improved?*

35 Loeber, R., & Farrington, D.P. (Eds.) (1999). *Serious & violent juvenile offenders – Risk factors and successful interventions*. Thousand Oaks, CA: Sage Publications.

36 A body of earlier studies had established a positive relationship between teacher education levels and the quality of early care and education programs, which has been the basis for teacher degree requirements in pre-kindergarten and other early care and education programs. Although the research about teacher education levels and its association with quality has become more complex in recent years, the evidence remains clear that teacher's skills and interactions with children matter for providing quality early care and education programs. Teachers with minimal education and training are less likely to be well equipped with the essential skills needed to provide quality early care and education.

Whitebook, M. (2003). *Early education quality: Higher teacher qualifications for better learning environments—A review of the literature*. Berkeley, CA: UC Berkeley, Institute of Industrial Relations; Early, D. M., Maxwell, K. L., Burchinal, M., Alva, S., Bender, R. H., Bryant, D. et al. (2007). Teachers' Education, Classroom Quality, and Young Children's Academic Skills: Results From Seven Studies of Preschool Programs. *Child Development*, 78, 558-580; Zaslow, M., Tout, K., Halle, T., Whittaker, J.V., Lavelle, B. & Child Trends. (2010). *Toward the identification features of effective professional development to early childhood education – Literature review*. Washington, DC: US Department of Education.; National Child Care Information and Technical Assistance Center. (2009). *Professional development research: Emerging findings and implications*. Fairfax, VA: Author; Vu, J.A., Jeon, H. & Howes, C. (2008). Formal education, credential, or both: Early childhood program classroom practices. *Early Education & Development*, 19(3), 479-504.

37 U.S. Government Accountability Office. (2012, February). *Early Child Care and Education: HHS and Education are taking steps to improve workforce data and enhance worker quality*. (GAO-12-248). Washington, DC: Author.

38 U.S. Bureau of Labor Statistics. (2011, May). *May 2011 National Occupational Employment and Wage Estimates*. Washington, DC: Author. Retrieved on June 20, 2012 from http://www.bls.gov/oes/current/oes_nat.htm; U.S. Bureau of Labor Statistics. (2011, May). *May 2011 State Occupational Employment and Wage Estimates – Michigan*. Washington, DC: Author. Retrieved on June 20, 2012 from http://www.bls.gov/oes/current/oes_mi.htm

39 U.S. Bureau of Labor Statistics. (2011, May). *May 2011 State Occupational Employment and Wage Estimates – Michigan*. Washington, DC: Author. Retrieved on June 20, 2012 from http://www.bls.gov/oes/current/oes_mi.htm

40 Pianta, R.C., & Hamre, B.K. (2009). Conceptualization, measurement, and improvement of classroom processes: Standardized observation can leverage capacity. *Educational Researcher*, 38(2) 109-119.

41 The Classroom Assessment Scoring System (CLASS) assesses three domains of effective teacher-student interactions: emotional support, classroom organization and instructional support. Teachstone. (2010). *Effective teacher-student interactions: Measuring and improving classroom practice*. Charlottesville, VA: Author.

42 Lynch, K. (March 2011). *Head Start: Background and issues*. Congressional Research Service.

43 The Head Start Impact Study, a large-scale randomized controlled trial of Head Start, found modest statistically significant positive effects on academic skills for children at the end their year in Head Start, so the program did help children enter kindergarten ready to learn. However, these initial positive effects had largely disappeared by the end of first grade.

It is worth noting, however, that multiple longitudinal early learning studies have found some degree of diminished effects on academic skills during the early elementary years, followed by enduring long-term effects into adulthood. In studies of high-quality programs that follow children into adulthood, such as the Perry Preschool Project and the Chicago Child-Parent Centers, these diminished (but still statistically significant) academic effects during the elementary years were later followed by impressive increases in rates of high school graduation, in earnings and meaningful decreases in criminal behavior.

Head Start's trajectory of effects on children has been more modest than the effects found in model longitudinal studies such as Perry Preschool, the Chicago Child-Parent Centers and the Abecedarian Project. Other nonexperimental long-term studies of the impacts of Head Start offer some confirmation of modest but mixed long-term results, with some showing modest positive effects on graduation and crime, and others finding no significant long-term effects. It may be that the children studied in the Head Start Impact Study, if followed into adulthood, would go on to demonstrate meaningful gains in graduation rates, increased earnings and reductions in crime. It is likely true, however, that reforms underway since the children participated in this study, and even more reforms, will be necessary to achieve the strong results shown to be possible in the long-term studies of Perry Preschool, Abecedarian and the Chicago Child-Parent Centers.

Puma, M., et al. (2010). *Head Start impact study: Final report*. Washington, DC: Administration for Children and Families, U.S. Department of Health and Human Services; Deming, David (2009). Early Childhood Intervention and Life-Cycle Skill Development: Evidence from Head Start. *American Economic Journal: Applied Economics*, 1(3), 111-134; Garces, E., Thomas, D., & Currie, J. (2002). Longer-term effects of Head Start. *American Economic Review*, 92(4), 999-1012.

44 A randomized control trial study of Early Head Start found notable positive effects on language

and cognitive development and reduced aggressive behavior at ages 3 and 5, but those outcomes were not sustained. Improvements in Early Head Start are already underway as part of the 2007 reauthorization of the program to ensure the positive early outcomes are strengthened and sustained. Love, J.M., Kisker, E.E., Ross, C., Constantine, J., Boller, K., Chazan-Cohen, R., et al. (2005). The effectiveness of Early Head Start for 3-year-old children and their parents: Lessons for policy and programs. *Developmental Psychology*, 41, 885-901; Vogel, C. A., Xue, Y., Moiduddin, E. M., Kisker, E. E., & Carlson, B. L. (2010). *Early Head Start children in grade 5: Long-term follow-up of the Early Head Start Research and Evaluation Study sample*. OPRE Report #2011-8, Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

45 Administration for Children and Families, Department of Health and Human Services. (2008). *Information Memorandum: Head Start Reauthorization P.L. 110-134*. Washington, DC: Author. Retrieved on April 24, 2012 from http://eclkc.ohs.acf.hhs.gov/hslc/standards/IMS/2008/resour_ime_001_010308.html

46 This figure is based on federal eligibility levels for CCDF assistance, rather than on the varying state eligibility levels. Assistant Secretary for Planning and Evaluation. (2010, April). Estimates of child care eligibility and receipt for Fiscal Year 2006. *ASPE Issue Brief*. Washington, DC, Author. Retrieved on April 24, 2012 from <http://aspe.hhs.gov/hsp/10/cc-eligibility/ib.shtml>

47 Payne, A. L. (2011, May). *Strong licensing: the foundation for a quality early care and education system*. Lexington, KY: National Association for Regulatory Administration. Retrieved on April 25, 2012 from http://www.naralicensing.drivvehq.com/publications/Strong_CC_Licensing_2011.pdf

48 CCDBG includes a quality set-aside portion of funding of four percent for quality enhancing activities. The Child Care and Development Block Grant Act of 1990 (42 USC 9858), as amended, and section 418 of the Social Security Act (42 USC 618), as amended. While no evaluations to date have comprehensively assessed the quality of CCDBG-funded programs, nationally representative data sets on families using child care assistance suggest that children in families receiving child care assistance have more negative academic and behavioral outcomes than comparable low-income children not receiving assistance, which reinforces the need to develop effective approaches to improve child care quality.

Herbst, C. M. & Tekin, E. (2010, August). The impact of child care subsidies on child well-being: Evidence from geographic variation in the distance to social service agencies. *National Bureau of Economic Research Working Paper 16250*; Griffen, A. S., Hawkinson, L. E., Dong, N., Maynard, R. A., & National Center for Education Evaluation and Regional Assistance, U.S. Dept. of Education. (2010, November). *The effect of child care subsidies on children's cognitive development*.

Unpublished paper presented at the Association for Public Policy Analysis and Management Fall 2010 Conference; Herbst, C., & Tekin, E. (2012, January). Child care subsidies, maternal well-being, and child-parent interactions: Evidence from three nationally representative datasets. *NBER Working paper # 17774*. Retrieved on February 29, 2012 from <http://crw.princeton.edu/workingpapers/WP12-01-FF.pdf>

49 Race to the Top – Early Learning Challenge Program Description. Retrieved on May 16, 2012 from <http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/index.html>

50 U.S. Department of Health and Human Services, Administration for Children and Families, Office of Child Care. (2012). *Pathways and partnerships for child care excellence*. Washington, DC: Author. Retrieved on April 24, 2012 from http://www.acf.hhs.gov/programs/occ/ta/pubs/pathways/pathways_partnerships_v1.pdf

51 Child Trends. (2010, May). Quality Rating and Improvement Systems for early care and education. *Early Childhood Highlights*, 7(1). Washington, DC: Author. Retrieved on May 17, 2012 from http://www.childtrends.org/Files/Child_Trends-2010_05_10_HL_QRIS.pdf; National Center on Child Care Quality Improvement. (2012). Quality Rating and Improvement System Resource Guide - About QRIS. Fairfax, VA: Author. Retrieved on May 17, 2012 from <http://www.acf.hhs.gov/resource/wwwroot/index.cfm?do=qrabout#1>

52 Alliance for Early Childhood Finance. (2012). *Quality rating and improvement systems*. Retrieved on April 24, 2012 from <http://www.earlychildhoodfinance.org/qr>

53 Child Trends. (2010, May). Quality Rating and Improvement Systems for early care and education. *Early Childhood Highlights*, 7(1). Washington, DC: Author. Retrieved on October 11, 2012 from http://www.childtrends.org/Files/Child_Trends-2010_05_10_HL_QRIS.pdf; Barnard, W., Etheridge Smith, W., Fiene, R., & Swanson, K. (2006.) *Evaluation of Pennsylvania's Keystone STARS quality rating system in child care settings*. Pittsburgh, PA: University of Pittsburgh Office of Child Development. Retrieved on Oct 11, 2012 from <http://www.pakeys.org/docs/Keystone%20STARS%20Evaluation.pdf>; Elicker, J., Clawson Langill, C., Ruprecht, K., & Kwon, K. (2007). *Paths to Quality: a scientific rating system for Indiana. What is its scientific basis?* West Lafayette, IN: Purdue University. Retrieved on October 11, 2012 from <http://www.in.gov/issa/files/ScientificBasisPTQ.pdf>; Grisham-Brown, J. Gravil, M., Gao, X., & Missal, K. (2008). *KIDS NOW evaluation*. University of Kentucky. Lexington, KY: University of Kentucky.

54 Joseph, G. E., Feldman, E.N., Brennan, C., Naslund, R., Phillips, J., & Petras, A. (2011). *Seeds to Success field test: Year two - final technical report*. University of Washington: Center for Research and Training, Childcare Quality and Early Learning. Retrieved on October 11, 2012 from http://www.del.wa.gov/publications/elac-qr/Seeds_to_Success_Final_Evaluation_June_2011.pdf; Boller, K., Del Grosso, P., Blair, R., Jolly, Y., Fortson, K., Paulsell, D., et al. (2010). *The Seeds to Success modified field test: Findings from the impact and implementation studies*. Mathematica Policy Research. Retrieved on October 11, 2012 from http://www.mathematica-mpr.com/publications/PDFs/EarlyChildhood/seeds_to_success_mft.pdf

55 Joseph, G. E., Feldman, E.N., Brennan, C., Naslund, R., Phillips, J., & Petras, A. (2011). *Seeds to Success field test: Year two - final technical report*. University of Washington: Center for Research and Training, *Childcare Quality and Early Learning*. Retrieved on October 11, 2012 from http://www.del.wa.gov/publications/elac-qr/Seeds_to_Success_Final_Evaluation_June_2011.pdf; Boller, K., Del Grosso, P., Blair, R., Jolly, Y., Fortson, K., Paulsell, D., et al. (2010). *The Seeds to Success modified field test: Findings from the impact and implementation studies*. Mathematica Policy Research. Retrieved on October 11, 2012 from http://www.mathematica-mpr.com/publications/PDFs/EarlyChildhood/seeds_to_success_mft.pdf

56 Tout, K., Starr, R., Soli, M., Moodie, S., Kirby, G., & Boller, K. (2010). *The child care Quality Ratings System assessment: Compendium of quality rating systems and evaluation*. Washington, DC: Child Trends & Mathematica Policy Research. Retrieved on October 11, 2012 from http://www.acf.hhs.gov/programs/opre/cc/childcare_quality/compendium_qrs/qrs_compendium_final

pdf; Child Trends. (2010, May). Quality Rating and Improvement Systems for early care and education. *Early Childhood Highlights*, 1(1). Washington, DC: Author. Retrieved on October 11, 2012 from http://www.childtrends.org/Files/Child_Trends-2010_05_10_HL_QRIS.pdf; Norris, D., Dunn, L., & Eckert, L. (2003). *“Reaching for the stars” center validation study final report*. Norman, OK: University of Oklahoma, Early Childhood Collaborative of Oklahoma. Retrieved on October 11, 2012 from http://www.okdhs.org/NR/rdonlyres/4C0EF19D-6FC4-40C6-8926-A3371B7F4130/0/ReachingForTheStarsCenterValidationStudyFinalReport_dcc_05212007.pdf

57 An additional QRIS evaluation study, in Colorado, examined child outcomes and found mixed results, but the study had several flaws, including significant sample attrition, rendering its findings inconclusive. Zelman, G. L., Perlman, M., Le, V., & Setodji, C. M. (2008). *Assessing the validity of the Qualistar Early Learning quality rating and improvement system as a tool for improving child-care quality*. (MG-650-QEL). Santa Monica, CA: RAND Corporation. Retrieved on March 29, 2011 from <http://www.rand.org/pubs/monographs/MG650.html>

58 Tout, K., Starr, R., Soli, M., Moodie, S., Kirby, G., & Boller, K. (2010). *The child care Quality Ratings System assessment: Compendium of quality rating systems and evaluation*. Washington, DC: Child Trends & Mathematica Policy Research. Retrieved on October 11, 2012 from http://www.acf.hhs.gov/programs/opre/cc/childcare_quality/compendium_qrs/qrs_compendium_final.pdf; Thornburg, K. R., Mayfield, W. A., Hawks, J.S., & Fuger, K. L. (2009). *The Missouri Quality Rating System school readiness study: Executive summary*. Kansas City, MO: Center for Family Policy & Research, University of Missouri, and the Institute for Human Development, University of Missouri. Retrieved on October 11, 2012 from <http://mucenter.missouri.edu/MOQRSexec.pdf>

59 Thornburg, K. R., Mayfield, W. A., Hawks, J.S., & Fuger, K. L. (2009). *The Missouri Quality Rating System school readiness study: Executive summary*. Kansas City, MO: Center for Family Policy & Research, University of Missouri, and the Institute for Human Development, University of Missouri. Retrieved on October 11, 2012 from <http://mucenter.missouri.edu/MOQRSexec.pdf>; Thornburg, K. R., Mayfield, W. A., Hawks, J.S., & Fuger, K. L. (2009). *The Missouri Quality Rating System school readiness study*. Kansas City, MO: Center for Family Policy & Research, University of Missouri, and the Institute for Human Development, University of Missouri. Retrieved on October 11, 2012 from <http://mucenter.missouri.edu/MOQRSexec.pdf>

60 Child Trends. (2010, May). Quality Rating and Improvement Systems for early care and education. *Early Childhood Highlights*, 1(1). Washington, DC: Author. Retrieved on October 11, 2012 from http://www.childtrends.org/Files/Child_Trends-2010_05_10_HL_QRIS.pdf; Thornburg, K. R., Mayfield, W. A., Hawks, J.S., & Fuger, K. L. (2009). *The Missouri Quality Rating System school readiness study: Executive summary*. Kansas City, MO: Center for Family Policy & Research, University of Missouri, and the Institute for Human Development, University of Missouri. Retrieved on October 11, 2012 from <http://mucenter.missouri.edu/MOQRSexec.pdf>; Thornburg, K. R., Mayfield, W. A., Hawks, J.S., & Fuger, K. L. (2009). *The Missouri Quality Rating System school readiness study*. Kansas City, MO: Center for Family Policy & Research, University of Missouri, and the Institute for Human Development, University of Missouri. Retrieved on October 11, 2012 from <http://mucenter.missouri.edu/MOQRSexec.pdf>

61 Elicker, J.G., Langill, C. C., Ruprecht, K. M., Lewsader, J., & Anderson, T. (2011). *Evaluation of “Paths to QUALITY,” Indiana’s child care quality rating and improvement system: Final report*. (Technical report #3). West Lafayette, Indiana: Purdue University. Retrieved on October 11, 2012 from http://www.cfs.purdue.edu/cff/documents/project_reports/PTQFinalReportRev11012.pdf

62 Tout, K. Starr, R., Isner, T., Cleveland, J., Albertson-Junkans, L., Soli, M., & Quinn, K. (2011). *Evaluation of Parent Aware: Minnesota’s quality rating and improvement system pilot. (Final report summary)*. Retrieved on October 11, 2012 from https://s3.amazonaws.com/Omnera/VerV/s3finder/38/pdf/Parent_Aware_Year_4_Final_Full_summary_report_Dec_2011.pdf

63 Early Childhood Advisory Council, Office of the Governor. (2011). *Race to the Top - Early Learning Challenge application, North Carolina*. Retrieved on October 11, 2012 from <http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/awards.html>

64 Barnett, W.S., Carolan, M. E., Fitzgerald, J., & Squires, J.H. (2011). *The state of preschool 2011 – State preschool yearbook*. New Brunswick, NJ: Rutgers University, National Institute for Early Education Research.

65 Schweinhart, L.J., Xiang, Z., Daniel-Echols, M., Browning, K., & Wakabayashi, T. (2012, March). *Michigan Great Start Readiness Program evaluation 2012: High school graduation and grade retention findings*. Retrieved on August 14, 2012 from <http://bridgemi.com/wp-content/uploads/2012/06/GSRP-evaluation-may-21-12.pdf>

66 Administration for Children and Families. (2010). *Head Start Program Fact Sheet, Fiscal Year 2009 state data*. Retrieved on May 14, 2012 from <http://www.acf.hhs.gov/programs/ohs/about/fy2010.html>. Does not include tribal or migrant Head Start programs.

67 Administration for Children and Families. (2011). *FFY 2010 CCDF Data Tables, Table 1*. Retrieved on May 14, 2012 from http://www.acf.hhs.gov/programs/ccb/data/ccdf_data/10acfb00_preliminary/table1.htm

68 Barnett, W.S., Carolan, M. E., Fitzgerald, J., & Squires, J.H. (2011). *The state of preschool 2011 – State preschool yearbook*. New Brunswick, NJ: Rutgers University, National Institute for Early Education Research.

69 Early Childhood Investment Corporation. (n.d.). *Great Start to Quality*. Lansing, MI: Author. Retrieved on August 10, 2012 from <http://greatstartforkids.org/content/great-start-quality>; Early Childhood Investment Corporation. (2012.). *Early learning & development programs Great Start to Quality STARS user manual*. Lansing, MI: Author. Retrieved on August 10, 2012 from <http://greatstartforkids.org/sites/default/files/file/CONNECT/STARS%20program%20manual.pdf>

70 KIDS COUNT data center. Child population by age group: 0 to 4. 2011. Vintage 2011 population estimates from U.S. Census Bureau. Baltimore, MD: Author. Retrieved on June 26, 2012 from <http://datacenter.kidscount.org/>

71 KIDS COUNT data center. Children under age 6 with all available parents in the labor force. (2010). *Population Reference Bureau analysis of data from the U.S. Census Bureau, 2008-2010 American Community Survey*. Baltimore, MD: Author. Retrieved on June 26, 2012 from <http://datacenter.kidscount.org/>

72 Child care programs are required to meet licensing standards, but these generally focus on health and safety issues (sanitation procedures, fire escape routes, etc.), as well as ensuring basic standards of care (the maximum number of children allowed per caregiver). While licensing standards are important for basic health and safety of children, they do not ensure high-quality early care and education for Michigan’s children. Payne, A. L. (2011, May). *Strong licensing: the foundation*

for a quality early care and education system. Lexington, KY: National Association for Regulatory Administration. Retrieved on April 25, 2012 from http://www.naralicensing.drivehq.com/publications/Strong_CC_Licensing_2011.pdf

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Report authored by Stephanie Schaefer, Ph.D. and Lindsay Warner.

The following staff members of FIGHT CRIME: INVEST IN KIDS contributed to production of this report: Dan Barash, K.P. Pelleran, Meredith Wiley, Arielle Bernstein, William Christeson, Mike Kiernan, Natasha O'Dell Archer, Miriam Rollin, Soren Messner-Zidell and Ted Eismeier.

Boji Tower - Suite 1220
124 W. Allegan Street
Lansing, MI 48933
Tel 517.371.3565
Fax 517.371.3567

www.fightcrime.org/mi

