

IN THE SUPREME COURT OF PENNSYLVANIA

Dockets Nos. 2 EAP 2018 and 3 EAP 2018

LORA JEAN WILLIAMS; GREGORY J. SMITH; CVP MANAGEMENT, INC. d/b/a or t/a CITY VIEW PIZZA; JOHN'S ROAST PORK, INC. f/k/a JOHN'S ROAST PORK; METRO BEVERAGE OF PHILADELPHIA, INC. d/b/a or t/a METRO BEVERAGE; DAY'S BEVERAGES, INC. d/b/a or t/a DAY'S BEVERAGES; AMERICAN BEVERAGE ASSOCIATION; PENNSYLVANIA BEVERAGE ASSOCIATION; PHILADELPHIA BEVERAGE ASSOCIATION; and PENNSYLVANIA FOOD MERCHANTS ASSOCIATION,
Appellants,

v.

CITY OF PHILADELPHIA and FRANK BRESLIN, IN HIS OFFICIAL CAPACITY AS COMMISSIONER OF THE PHILADELPHIA DEPARTMENT OF REVENUE,
Appellees.

BRIEF OF *AMICI CURIAE* CHANGELAB SOLUTIONS, CHILDREN'S DEFENSE FUND, HIGHSOPE EDUCATIONAL RESEARCH FOUNDATION, PENNSYLVANIA ASSOCIATION FOR THE EDUCATION OF YOUNG CHILDREN, AND PENNSYLVANIA CHILD CARE ASSOCIATION IN SUPPORT OF APPELLEES TO AFFIRM THE COMMONWEALTH COURT

OPINION OF JUNE 14, 2017

On allowance of appeal from an Order of the Commonwealth Court of Pennsylvania, in Nos. 2077, 2078 C.D. 2016, entered June 14, 2017, affirming Orders of the Court of Common Pleas of Philadelphia County in September Term 2016, No. 01452, entered December 19, 2016

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("Admission pro hac vice shall not be required in order to participate in a case
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STATEMENTS OF INTEREST OF *AMICI CURIAE*¹

ChangeLab Solutions is a national nonprofit organization that creates innovative laws and policies to ensure everyday health for all, whether that's providing access to affordable, healthy food and beverages, creating safe opportunities for physical activity, or ensuring the freedom to enjoy smoke-free air and clean water. ChangeLab Solutions addresses all aspects of a just, vital, and thriving community, such as food, housing, child care, schools, transportation, public safety, jobs, and the environment. It creates and helps implement legal and policy solutions designed to support young children and working families, including by increasing access to and the quality of early childhood education.

The **Children's Defense Fund's** Leave No Child Behind[®] mission is to ensure every child a Healthy Start, a Head Start, a Fair Start, a Safe Start and a Moral Start in life and successful passage to adulthood with the help of caring families and communities. For more than forty years, CDF has worked to ensure policies are in place to provide all children, particularly the most vulnerable children, quality comprehensive health coverage and care and quality early childhood and development opportunities, and fully recognize the interactions between the two. Children's brains are developing rapidly in their first five years

¹ No person or entity other than the *amici curiae*, their members, or their counsel (i) paid in whole or in part for the preparation of the *amicus curiae* brief or (ii) authored in whole or in part the *amicus curiae* brief.

as they build a foundation for all future outcomes in school and in life. Research shows that investments in quality early childhood programs generate an average annual return of 7-10 percent on every dollar invested. CDF commits organizational resources in support of policies that help to guarantee that all poor and vulnerable young children have access to a high quality continuum of early childhood programs that can comprehensively address their needs and the needs of their families. We believe there is no better investment in the future health and well-being of our nation.

The **HighScope Educational Research Foundation** is an independent, nonprofit organization committed to supporting the critical work of educators and caregivers in providing high-quality early childhood education. Founded in 1970, HighScope is headquartered in Ypsilanti, Michigan with institutes around the world. HighScope is well-known for the Perry Preschool Study that first established the lasting human and financial value of early childhood education. As a research and practice organization with over 40 years of experience providing professional learning services and tools and research and evaluation support to local, state, and federal early education programs, agencies, and organizations, we understand the value and impact of high quality early learning opportunities for children and families, especially for those from low-resources homes and communities. Vast evidence provides indisputable evidence of the life-long impact

of high quality early childhood education. Specifically, high quality and comprehensive early childhood education is an effective strategy in supporting the health and wellbeing of young children and has the potential to change the trajectory of families.

The **Pennsylvania Association for the Education of Young Children (PennAEYC)** is an affiliate of the National Association for the Education of Young Children (NAEYC). We are a dynamic membership organization of nearly 4,500 early care and education professionals from across the state, dedicated to the vision that every child in Pennsylvania has the equal opportunity to be a successful, responsible, and productive member of society as a result of their early childhood experiences. PennAEYC's vision and mission are fulfilled through dedication to leadership, advocacy, education, quality improvement and networking for those who act on behalf of the needs and well-being of young children.

The **Pennsylvania Child Care Association (PACCA)** is a statewide non-profit, membership organization. For more than 40 years, PACCA has served as a resource and clearinghouse of information for practitioners, agencies, press, legislators and the general public. PACCA's members operate nearly 1,800 center, group and family child care programs employing over 25,000 staff and caring for over 140,000 children aged birth through school-age. PACCA's membership also

includes Child Care Information Services (CCIS) that provide county-wide child care resource and referral services. Additionally, our members include those who have a business or personal interest in high-quality child care. PACCA's leaders and members share a commitment to providing high-quality child development and early learning opportunities to children in programs across the Commonwealth. Our members are devoted to assuring that the children in their care are happy, healthy, and successful, and develop to their full potential as students, future employees, and citizens.

INTRODUCTION & SUMMARY OF ARGUMENT

The Philadelphia Beverage Tax matters. From access to medical and dental care to increased physical activity; from healthier eating habits to lessening of food insecurity; from reduced tobacco use to better mental health – programs funded by revenues from the PBT will have a pronounced and lasting positive impact on the lives of the youngest and most vulnerable of the City’s residents.¹ The PBT is thus not only an investment in education and public health, but in the future of Philadelphia.

As the Court of Common Pleas found, and the Commonwealth Court affirmed, the PBT is a proper exercise of the City’s authority to levy taxes for the benefit of its residents. That issue is the fulcrum on which this case turns, and the extraordinary care that the City took to ensure that the PBT accords fully with the Sterling Act, 53 P.S. § 15971-15973, reflects the importance of the tax’s purpose: to raise revenue to fund crucial initiatives like early childhood education for low-income 3- and 4-year-olds who otherwise would grow up without the health and educational benefits those programs provide.

¹ Geraldine Dawson et al., *The Role of Early Experiences in Shaping Behavioral and Brain Development and Its Implications for Social Policy*, 12 DEVELOPMENT AND PSYCHOPATHOLOGY 695 (2000), at <https://pdfs.semanticscholar.org/f7f7/b2e592b307d5b13ec7e15ad6089ecc16e90a.pdf>.

ARGUMENT

High-quality early childhood education – like the programs funded by the PBT² – can “successfully put children and families on the path toward lifelong health and well-being, especially those at greatest risk of poor outcomes.”³

Philadelphia’s efforts in enacting the PBT to provide programs like high-quality early education thus promise long-lasting dividends for the City’s public health.

Early childhood education programs are particularly valuable for “children who have had early experiences of economic scarcity and insecurity.”⁴ In other words, as a wide-ranging study noted of programs like this one: “Universal programs benefit disadvantaged children.”⁵ Making high-quality early childhood education available to tens of thousands of additional children in Philadelphia is thus a critical opportunity to improve public health and address health inequities both now and for decades to come.

² See *Final Recommendations Report*, PHILADELPHIA COMMISSION ON UNIVERSAL PRE-KINDERGARTEN (Apr. 15, 2016), at <http://www.phila.gov/universalprek/Documents/Recommendations%20Report.pdf>.

³ Jill S. Cannon, *Investing Early: Taking Stock of Outcomes and Economic Returns from Early Childhood Programs*, RAND CORPORATION (2017), at https://www.rand.org/pubs/research_reports/RR1993.html.

⁴ *Id.*

⁵ Sneha Elango et al., *Early Childhood Education*, NAT’L BUREAU ECON. RESEARCH (2015), at <http://www.nber.org/papers/w21766>.

A. EARLY CHILDHOOD EDUCATION FUNDED BY THE BEVERAGE TAX CAN DIRECTLY AND POSITIVELY AFFECT THE HEALTH AND WELL-BEING OF PHILADELPHIA’S CHILDREN.

As set forth in the separate *amicus* brief of Public Citizens for Children & Youth et al., the benefits of preschool for future educational attainment are themselves sufficient to justify the PBT. But the advantages of early education go much further, extending to a broad array of beneficial health effects for children and families that may last a lifetime.

1. Early Childhood Education Can Improve Lifelong Physical Health

Early childhood education programs serve as essential gateways to physical health improvements. Children’s physical health – broadly defined to include increased access to health care, healthier behaviors, and general well-being and lack of illness⁶ – can be directly improved by access to early childhood education programs.⁷

⁶ See Allison Friedman-Krauss and W. Steven Barnett, NATIONAL INSTITUTE FOR EARLY EDUCATION RESEARCH (NIERR), *Early Childhood Education: Pathways to Better Health*, at 6, at <http://nieer.org/wp-content/uploads/2016/08/health20brief.pdf> (“NIERR report”).

⁷ Gabriella Conti et al., *The Effects of Two Influential Early Childhood Interventions on Health and Healthy Behaviour*, 126 THE ECONOMIC JOURNAL (Oct. 2016) F28, at <http://ftp.iza.org/dp9247.pdf>.

a. Early childhood education participants receive increased access to health care

High-quality early childhood education programs are associated with increased access to health care. “Preschool participants are more likely to go to the doctor, receive appropriate screenings and immunizations, and receive dental care, all of which contribute to improvements in childhood health.”⁸

Research has shown that participation in a high-quality early education program is correlated with increased access to health screenings, an increased likelihood of receiving appropriate vaccinations, and an increased likelihood of visiting a doctor or dentist. For instance, a study of over 5,000 children found that 3- and 4-year-olds enrolled in Head Start were significantly more likely to receive treatment for dental caries (cavities) than other low-income children.⁹ A separate study found that students in early childhood development programs had increased health screenings and dental examinations; the study reported “a 44% difference in receipt of eight health screening examinations and a 61% difference in receipt of

⁸ NIEER report, *supra* note 6, at 7, at <http://nieer.org/wpcontent/uploads/2016/08/health20brief.pdf>, citing Martha Abbott-Shim et al., *A Comparison of School Readiness Outcomes for Children Randomly Assigned to a Head Start Program and the Program’s Wait List*, 8 JOURNAL OF EDUCATION FOR STUDENTS PLACED AT RISK 191 (2003).

⁹ Julie M.W. Tang et al., *Dental Caries: Prevalence and Treatment Levels in Arizona Preschool Children*, 112 *Public Health Reports* 319 (1997), at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1381972/pdf/pubhealthrep00039-0057.pdf>.

dental examinations among program participants compared with controls.”¹⁰

Similarly, a longitudinal study found that children who participated in Head Start were more likely to receive health screenings, and children in both Head Start and center-based preschool programs were more likely to receive screenings for ADHD.¹¹ Because all children enrolled in programs funded by the PBT must have annual vision, dental, and health screenings, Philadelphia’s program is primed to achieve similar positive health care screening and access outcomes.¹²

Early access to health care in childhood is also significant because the benefits can continue into adulthood. A longitudinal study found that low-income individuals who participated in a high-quality preschool program had higher rates of health insurance coverage from any source (public or private) in their third decade of life than low-income individuals who did not participate in such a program.¹³ PBT-funded programs thus have the potential to improve the health of Philadelphia residents long into the future.

¹⁰ Laurie M. Anderson et al., *The Effectiveness of Early Childhood Development Programs: A Systematic Review*, 24 AM. J. PREV. MED. 32 (2003), at <https://www.thecommunityguide.org/sites/default/files/publications/he-AJPM-evrev-eed.pdf>, citing Barbara Hale et al., *Health Services and Head Start: A Forgotten Formula*, 11 J. APPLIED DEV. PSYCH. 447 (1990).

¹¹ NIEER report, *supra* note 6, at 7, <http://nieer.org/wpcontent/uploads/2016/08/health20brief.pdf>, citing Clive R. Belfield & Inas R. Kelley, *Early Education and Health Outcomes of a 2001 U.S. Birth Cohort*, ECON. & HUMAN BIOLOGY (2013).

¹² See PHLpreK, *Continuation Application Packet*, at 3, 14, at <http://www.phlprek.org/wp-content/uploads/2018/03/CAP-Application-Packet-FY19.pdf> (“PHLpreK Application”).

¹³ Arthur J. Reynolds et al., *Effects of a School-Based, Early Childhood Intervention on Adult Health and Well-being: A 19-Year Follow-up of Low-Income Families*, 161 ARCHIVES OF PEDIATRIC ADOLESCENT MEDICINE 730 (2007), at <https://jamanetwork.com/journals/jamapediatrics/fullarticle/570882>.

b. Early childhood education increases access to nutritious foods and reduces food insecurity

Participation in early childhood education programs funded by the PBT can also help to reduce food insecurity and improve nutrition, especially among vulnerable low-income populations. Food insecurity leads to poor health outcomes for children and families. As the Centers for Disease Control (CDC) reports, even marginal food security – a designation used to indicate that a household “may experience difficulty or anxiety” in providing nutritious food – “is a significant predictor of poor health status risk in children.”¹⁴ Food insecurity puts children at greater risk of developing asthma and is associated with an increased risk of childhood obesity, iron deficiency, poor social-emotional development, and other health problems.¹⁵ Food insecurity can also lead to poor educational outcomes, and can negatively impact school readiness among preschool-aged children.¹⁶ A survey of young children in North Philadelphia found that over 1 in 4 families reported household food insecurity in 2016; the study revealed that trends of childhood food

¹⁴ Melanie Meisenheimer, *Food Insecurity in Early Childhood*, CENTER FOR THE STUDY OF SOCIAL POLICY, (2016), at <https://www.cssp.org/publications/general/document/Food-Insecurity-Early-Childhood.pdf>.

¹⁵ *Id.*

¹⁶ *Id.*

insecurity in Philadelphia are worsening – rates nearly tripled between 2006 and 2016.¹⁷

Participation in early childhood education programs paid for by the PBT can help to address this problem. PBT revenues support high-quality child care centers that are implementing the Philadelphia Department of Public Health’s Comprehensive Nutrition Standards. These standards set requirements *above and beyond* state requirements for both nutrition and physical activity.¹⁸ For example, a recent survey of all Early Childhood Education Centers in Philadelphia found that 67% served fruit once a day or more, 72% served vegetables once a day or more, and 84% never serve sugary drinks.¹⁹ Almost all PBT-funded early education providers also participate in USDA’s Child and Adult Care Food Program (CACFP), which reimburses child care institutions for providing eligible children a daily nutritious breakfast, lunch, and snack every day at no cost to families.²⁰

¹⁷ Drexel University, Center for Hunger-Free Communities, *Children’s Healthwatch: Philadelphia Hardship Data* (2017), at <https://www.centerforhungerfreecommunities.org/childrens-healthwatch/philadelphia-hardship-data>.

¹⁸ See PHLpreK Application, *supra* note 12, at 14, at <http://www.phlprek.org/wp-content/uploads/2018/03/CAP-Application-Packet-FY19.pdf>; 55 Pa. Code § 3270.161-166 (Child Day Care Centers - Nutrition); Phila. Dep’t Pub. Health, *Memorandum re Revisions to the Nutrition Standards* (June 20, 2016), at <http://www.phila.gov/health/pdfs/RevisionsNutritionStandardsImplementationProcess2016.pdf>; Phila. Dep’t Pub. Health, *Chronic Disease: Citywide Nutrition Standards*, at <http://www.phila.gov/health/chronicdisease/nutritionstandards.html> (“*Citywide Nutrition Standards*”).

¹⁹ Phila. Dep’t Pub. Health, *Philadelphia Early Childhood Education Centers’ Health and Wellness Survey* (2017), at 2, at <http://www.dvaeyc.org/wp-content/uploads/2016/02/2018-Conference-C-10.pdf> (“*Health and Wellness Survey*”).

²⁰ *Citywide Nutrition Standards*, *supra* note 18, at <http://www.phila.gov/health/chronicdisease/nutritionstandards.html>.

Studies have found that participation in CACFP improves the dietary intake of low-income children in early childhood education settings and can also reduce the prevalence of overweight and underweight students.²¹ Because eighty-one percent of families enrolled in early childhood education programs funded by the PBT earn less than 200% of the Federal Poverty Level (\$49,200 for a family of 4),²² the PBT provides Philadelphia with a unique opportunity to reduce food insecurity and increase nutrition for its most vulnerable children.

c. Preschool attendees engage in improved health behaviors

PBT-funded early childhood education programs also encourage healthier practices among participants, including nutritious eating and physical activity. For example, a recent survey of all early childhood education centers in Philadelphia found that 94% provided preschoolers with at least 30 minutes of physical activity per day.²³ These practices are associated with healthier outcomes, not only during the preschool period but continuing into later childhood and beyond, because “healthier children become healthier adults.”²⁴

²¹ Sanders Korenman et al., *The Child and Adult Care Food Program and the Nutrition of Preschoolers*, 28 EARLY CHILD RES. Q. (2013), at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3653583/pdf/nihms-401497.pdf>; Katherine Ralston et al., U.S. Dep’t Agric., *Children’s Food Security and USDA Child Nutrition Programs*, ECON. INFORMATION BULLETIN (June 2017), at <https://www.ers.usda.gov/webdocs/publications/84003/eib-174.pdf>.

²² Phila. Mayor’s Office of Education, *PHLpreK By the Numbers* (Dec. 2017), at <https://beta.phila.gov/media/20171207143524/PHL-BY-THE-NUMBERS-NO-CROPS.pdf>.

²³ *Health and Wellness Survey*, *supra* note 19, at 2, at <http://www.dvaeyc.org/wp-content/uploads/2016/02/2018-Conference-C-10.pdf>.

²⁴ NIEER report, *supra* note 6, at 10.

i. Health behaviors learned in early childhood education settings can reduce rates of obesity

Participation in early childhood education programs funded by the PBT can reduce rates of obesity for children, now and in the future. Healthy eating and physical activity habits are established from an early age, with early childhood identified as a “critical period for the prevention of obesity and development of protective behaviors.”²⁵ Researchers have found that children enrolled in center-based care are “more likely to be physically active, and more likely to consume a nutritious diet during preschool.”²⁶ These healthy behaviors have important consequences: recent analyses of longitudinal data have found that “children enrolled in center-based pre-school including Head Start were less likely to be obese.”²⁷

Because the twin health crises of obesity and diabetes facing Philadelphians are vast in scope, the significance of even modest gains in this area is difficult to overstate. In the United States, rates of obesity among young children and adolescents have more than tripled in the past thirty years,²⁸ to the point where

²⁵ Healthy Eating Research, *Research Review: Early Care and Education Policies and Programs* (2017), at 1, at http://healthyeatingresearch.org/wp-content/uploads/2018/01/her_ece_011718-1.pdf.

²⁶ NIEER report, *supra* note 6, at 7.

²⁷ *Id.*, citing Clive R. Belfield & Inas R. Kelley, *Early Education and Health Outcomes of a 2001 U.S. Birth Cohort*, ECON. & HUMAN BIOLOGY (2013).

²⁸ Cynthia Ogden & Margaret Carroll, *Prevalence of Obesity Among Children and Adolescents: United States*, NCHS Health E-Stat (June 4, 2010), at http://www.cdc.gov/nchs/data/hestat/obesity_adult_07_08/obesity_adult_07_08.pdf

more than a sixth of American youth are obese.²⁹ In Philadelphia, the number is higher still: more than one in every five.³⁰ Among counties containing the largest U.S. cities, Philadelphia County has the highest prevalence of hypertension and heart disease, and the second highest prevalence of obesity.³¹

Diabetes may present an even more profound threat. The odds of an African-American or Hispanic preschool-age child developing the condition during her lifetime are 1 in 2.³² In other words, since more than half the population of Philadelphia is African-American or Hispanic,³³ a *majority* of Philadelphians face a future in which they are as likely as not to develop diabetes.³⁴ Early childhood

²⁹ Cynthia Ogden et al., *Prevalence of Childhood and Adult Obesity in the United States, 2011-2012*, 311 JAMA 806 (2014).

³⁰ Phila. Dep't Pub. Health, *2017 Health of the City*, at 2 (2017), at http://www.phila.gov/health/pdfs/Health_of_City_report_FINAL_lowres.pdf (“*2017 Health of the City*”).

³¹ See Nat'l Ctr. for Chronic Disease Prevention and Health Promotion, U.S. Dep't of Health and Human Servs., *Behavioral Risk Factor Surveillance System* (2009); Nat'l Ctr. for Chronic Disease Prevention and Health Promotion, U.S. Dep't of Health and Human Servs., *Behavioral Risk Factor Surveillance System* (2008). See also Phila. Dep't Pub. Health, *Community Health Assessment 2017*, at 7, at <http://www.phila.gov/health/commissioner/DataResearch.html> (“*Community Health Assessment 2017*”) (“The obesity epidemic is leading to very high rates of diabetes in all racial and ethnic groups, but particularly high rates in non-Hispanic Blacks, in which the prevalence is nearly 20% of adults.”).

³² Centers for Disease Control & Prevention, *Now, 2 Out of Every 5 Americans Expected to Develop Type 2 Diabetes During Their Lifetime*, at <http://www.cdc.gov/diabetes/pdfs/newsroom/now-2-out-of-every-5-americans-expected-to-develop-type-2-diabetes-during-their-lifetime.pdf> (last visited April 11, 2018).

³³ *2017 Health of the City*, *supra* note 30, at 2, at http://www.phila.gov/health/pdfs/Health_of_City_report_FINAL_lowres.pdf; Philadelphia Research Initiative, *A City Transformed: The Racial and Ethnic Changes in Philadelphia Over the Last 20 Years*, PEW CHARITABLE TRUSTS (2011), http://www.pewtrusts.org/~media/legacy/uploadedfiles/wwwpewtrustsorg/reports/philadelphia_research_initiative/philadelphiapopulationethnicchanges.pdf.pdf.

³⁴ Obese children are more likely to have type 2 diabetes, asthma, and even early signs of heart disease; they are also more likely to be obese adults and to have shortened life expectancy.

education and nutrition are a critical part of addressing this epidemic. The City is facing a developing public health crisis – one that threatens more than half its children; the PBT represents a crucial, long-term step toward fighting this scourge.

ii. Participation in high-quality early childhood education programs can reduce smoking rates

Participation in high quality early-childhood programs may have other, less direct – yet still highly significant – benefits. For example, attendance at preschool has been shown to reduce smoking prevalence in adulthood. One study found that participation in a high-quality preschool program resulted in a “substantial and significant reduction in both smoking prevalence and intensity among the males in the treatment group, with effects already present at age 27 and sustained through age 40.”³⁵ Tobacco use is the leading cause of preventable death in the United States.³⁶ And it is more prevalent in Philadelphia than in any other big city in the nation.³⁷

Avoiding smoking has numerous health benefits, including substantially decreased risk of developing many cancers and cardiovascular and respiratory

Elizabeth R. Pulgaron & Alan M. Delamater, *Obesity and Type 2 Diabetes in Children: Epidemiology and Treatment*, 14 CURRENT DIABETES REPORTS 508 (2014), at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4099943/>

³⁵ Conti et al., *supra* note 7, at 20.

³⁶ U.S. Dep’t of Health & Human Servs., *The Health Consequences of Smoking – 50 Years of Progress: A Report of the Surgeon General*, at 11 (2014), at <https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf>.

³⁷ *Community Health Assessment 2017*, *supra* note 31, at 7, at <http://www.phila.gov/health/commissioner/DataResearch.html> (“Approximately 22 percent of Philadelphia adults report cigarette smoking – more than any other major city in the U.S.”).

diseases.³⁸ As the CDC reports, “[o]verall mortality among both male and female smokers in the United States is about three times higher than that among similar people who never smoked.”³⁹ Early childhood education thus has the potential to reduce long-term smoking rates and to result in longer and healthier lives for Philadelphia’s children.

d. Early childhood education leads to improved academic outcomes, which have long-term health benefits

The direct health benefits of early childhood education also can lead to “greater school attendance and achievement, which in turn is associated with greater adult health.”⁴⁰ According to the American Academy of Pediatrics, “[h]igh quality early education and child care for young children improves their health and promotes their development and learning.”⁴¹ Children who are healthy are “more likely to be ready for school and ready to learn. They are less likely to be absent and more likely to pay attention and learn while in school.”⁴² As a result, “early education programs can improve both the health and the academic achievement of

³⁸ Office of Smoking & Health, CDC, *Tobacco-Related Mortality*, at https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/index.htm (last visited April 11, 2018).

³⁹ *Id.*

⁴⁰ NIEER report, *supra* note 6, at 6 (citations omitted).

⁴¹ *Id.*

⁴² *Id.*

children, which translate into long term improvements in health during adulthood.”⁴³

Similarly, the improvements in cognitive abilities that early childhood education may produce “are associated with greater academic achievement and attainment which translates into better jobs and greater earnings, both of which are associated with better adult health.”⁴⁴ As the National Institute for Early Education Research observed in its comprehensive survey of the impact of early education:

There is a large evidence base indicating that participation in early childhood education programs is indeed associated with significant gains in cognitive development, including math and language/literacy skills. More intelligent, knowledgeable, and educated individuals not only know more about health issues, but are also more likely to trust scientific health information and are better able to use that knowledge to make health decisions and healthy lifestyle changes. These same individuals are more adept at seeking and complying with medical treatment.⁴⁵

2. Early Childhood Education Can Boost Behavioral and Mental Health

Mental health may also benefit from early childhood education. One recent review of studies examining the impacts of programs on children’s health outcomes found “evidence of greater mental health and social emotional competence.”⁴⁶ When cognitive and social-emotional functioning improve, they in turn “influence[] readiness to learn in the school setting” and “there is a strong

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.* at 10-11.

⁴⁶ *Id.* at 7.

relationship between measures of educational attainment and a wide range of adult disease outcomes.”⁴⁷ Studies have shown that even the long-term risk of depression is reduced in individuals who participated in a high-quality preschool program.⁴⁸ When early childhood education programs include parent education and home visiting programs, the effects on children's long-term mental health are even more pronounced.⁴⁹

In sum, research findings “provide evidence that established early education programs can have enduring effects on general well-being into adulthood.”⁵⁰ Indeed, “[f]ew if any other interventions have shown such multifarious impacts.”⁵¹

That broad-ranging effect is, of course, the reason that Philadelphia took pains to craft a measure that complies scrupulously with state law. The early education funded by the PBT is a critical step toward ensuring that Philadelphia’s youngest and most vulnerable residents have access to conditions that will improve their health and wellbeing.

⁴⁷ Anderson et al., *supra* note 10, at 32, *at* <https://www.thecommunityguide.org/sites/default/files/publications/he-AJPM-evrev-eed.pdf>.

⁴⁸ Reynolds et al., *supra* note 13, *at* <https://jamanetwork.com/journals/jamapediatrics/fullarticle/570882>.

⁴⁹ NIEER report, *supra* note 6, at 9.

⁵⁰ Reynolds et al., *supra* note 13, *at* <https://jamanetwork.com/journals/jamapediatrics/fullarticle/570882>.

⁵¹ *Id.*

CONCLUSION

By enacting the PBT, Philadelphia has taken a bold step toward improving not only its residents' educational attainments but also their long-term health. For that reason, among many others, the decision of Commonwealth Court should be affirmed.

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I certify that this brief complies with Pa. R.A.P. 2135 because it includes 3,231 words, according to the word count feature of Microsoft Word 2016, excluding the parts exempted by Pa. R.A.P. 1115(g).

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