

**A White Paper in Support of Georgia's Shared Understanding,  
Shared Language, and Shared Sense of Urgency to Get All of Georgia Reading**

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## CONTENTS

	<b>Topic</b>	<b>Page</b>
I.	A Collective Response to Improving Reading Outcomes	Page 3
II.	Data About Third-Grade Reading in Georgia	Page 4
III.	Some of the Underlying Factors That Affect Children’s Ability to Read	Page 5
	<ul style="list-style-type: none"><li>• Attendance</li><li>• Physical Health</li><li>• School and Classroom Climate</li><li>• Language Development</li><li>• Social-Emotional Engagement</li><li>• Children’s Mental Health</li><li>• Birth Outcomes</li><li>• Early Childhood Education</li><li>• Summer Learning Loss and Out-of-School Time Learning</li><li>• Adult Literacy</li></ul>	
IV.	Examples of Actions That Can Support Children’s Ability to Read	Page 20
	<ul style="list-style-type: none"><li>• Attendance</li><li>• Physical Health</li><li>• School and Classroom Climate</li><li>• Language Development</li><li>• Social-Emotional Engagement</li><li>• Children’s Mental Health</li><li>• Birth Outcomes</li><li>• Early Childhood Education</li><li>• Summer Learning Loss and Out-of-School Time Learning</li><li>• Adult Literacy</li></ul>	
V.	Appendix	Page 30
	Get Georgia Reading Campaign Cabinet	

## I. A Collective Response to Improving Reading Outcomes

There is abundant research on the impact of third-grade reading proficiency on our economy, safety, and health—and yet 68 percent of children in Georgia were not reaching this milestone in 2012. The public and private sectors shared the same goal for Georgia’s children, but often their efforts—including outcomes, policies, and investments—were not well aligned.

Everyone agreed. We needed a new approach.

In 2013, Georgia’s public and private leaders came together to take on third grade reading—not only as an education issue—but as an urgent priority for all who care about children’s health and well-being. Together, they formed the Get Georgia Reading Campaign and developed a common agenda as a shared framework for action at both the state and community level.

That common agenda consists of four research-based pillars—Language Nutrition, Access, Positive Learning Climate, and Teacher Preparation and Effectiveness—that together, define the conditions essential for all children to be on a path—starting from birth—to reading proficiently by the end of third grade.

- **Language Nutrition:** All children receive abundant, language-rich, adult-child interactions, which are as critical for brain development as healthy food is for physical growth.
- **Access:** All children and their families have year-round access to, and supportive services for, healthy physical and social-emotional development and success in high-quality early childhood and elementary education.
- **Positive Learning Climate:** All educators, families, and policymakers understand and address the impact of learning climate on social-emotional development, attendance, engagement, academic achievement, and ultimately student success.
- **Teacher Preparation and Effectiveness:** All teachers of children ages 0 to 8 are equipped with evidence-informed skills, knowledge, and resources that effectively meet the literacy needs of each child in a developmentally appropriate manner.

The four pillars help all of us answer the following questions:

“When all children in Georgia, starting from birth, are on a path to reading proficiently by the end of third grade, what should I expect to see? What would I look for? What should I see evidence of?”

### **Shared Language, Shared Understanding, Shared Sense of Urgency**

The four pillars provide everyone with a shared language and understanding and serve as a framework for action at both the state and community level, enabling public and private funders to challenge conventional approaches, establish new partnerships, and align their investments to achieve measurable results.

### **Campaign partners carry out five key roles to firmly root these four pillars throughout Georgia:**

- 1) Identify and make sense of factors that affect children’s ability to read;
- 2) Use data to change the conversation and align policies and investments to strengthen the four pillars;
- 3) Connect, convene, and support decision-makers in moving from a sector-focused approach to a population-focused approach;
- 4) Inspire collective action and innovation to create the conditions essential for children to be on a path—starting from birth—to reading proficiently by the end of third grade; and
- 5) Celebrate partner successes and clearly communicate the possibilities to realize the common agenda across the state

## II. Data About Third-Grade Reading in Georgia

Schools deliver 85 percent or more of their curriculum by reading textbooks, smartboards, worksheets, computer screens, and tablets. It matters little what else students learn in elementary school if they do not learn to read proficiently.<sup>1</sup>

1. Research in Georgia following a cohort of more than 98,000 third-grade students from 2007 through 2016 found that students with higher third-grade reading scores had higher high school graduation rates, were more likely to take the ACT or SAT, and had higher average ACT and SAT scores compared to their counterparts.

**NOTE:** The graduation rate, ACT/SAT participation rate, and ACT/SAT score patterns were consistent **regardless** of student race/ethnicity, gender, poverty, English-Language Learner status, and disability status.<sup>2</sup>

2. In 2016, 35.1 percent of all third-grade students achieved at the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment.<sup>3</sup>
3. In 2016, 11.7 percent of third-grade students with disabilities achieved at the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment.<sup>4</sup>
4. In 2016, 38.4 percent of third-grade students without disabilities achieved at the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment.<sup>5</sup>
5. In 2016, 24 percent of economically disadvantaged third-grade students achieved at the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment.<sup>6</sup>
6. In 2016, 58.9 percent of non-economically disadvantaged third-grade students achieved at the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment.<sup>7</sup>
7. Research analyzing statewide student-level third-grade reading and eighth grade math scores in Georgia found that third-grade reading ability significantly predicts eighth-grade math outcomes.<sup>8</sup>
8. Research found that the highest predictive factor in ACT performance was third grade reading proficiency.<sup>9</sup>

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<sup>1</sup> Fielding, L., Kerr, N., & Rosier, P. (2007). *Annual Growth for all students, Catch-Up Growth for those who are behind*. Kennewick, WA: The New Foundation Press, Inc.

<sup>2</sup> Beaudette, P., Chalasani, K., Rauschenberg, S. (2017). How Do Students' 3rd Grade Reading Levels Relate to their ACT/SAT Performance and Chance of Graduating from High School? Governor's Office of Student Achievement: Atlanta.

<sup>3</sup> Governor's Office of Student Achievement (2016). K-12 Public Schools Report Card, downloadable education data.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ayoubi, D. (2014). A Brief Investigation Upon the Relationship Between 3<sup>rd</sup> Grade Reading Scores and 8<sup>th</sup> Grade Math Scores. Georgia Department of Education, Policy and Research Division: Atlanta.

<sup>9</sup> Smith, M., Turner, J., Lattanzio, S. The NC CAP "Roadmap of Need" Supports the Importance of the Read to Achieve Act. MetaMetrics.

### III. Some of the Underlying Factors That Affect Children’s Ability to Read

#### Attendance

1. Research shows that 1 out of 10 kindergarten and first-grade students are chronically absent—missing 10 percent or more days—nearly a month of school each school year. If that trend continues, by the time the student reaches high school he/she has missed almost an entire year of school.<sup>10</sup>
2. Georgia data show that school attendance significantly impacts third grade reading proficiency.<sup>11</sup>
  - Based on 2015 data, there is a 27-point difference in the percent of students who achieved the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment. In schools with the lowest percent of students missing 15 or more days (the lowest quartile of those schools) the percent of students who achieved the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment was 51 percent, compared to only 24 percent in schools with the highest percent of students missing 15 or more days (the top quartile of those schools).
3. Research shows that although 86 percent of parents understand their child’s school attendance plays an important role in their academic achievement, 49 percent believe that it is okay for their children to miss three or more days of school per month—and that they won’t fall behind academically if they do.<sup>12</sup>

#### Physical Health

##### Vision

1. Data indicate 25 percent of children and adolescents have vision impairments, mostly caused by refractive errors, and are in need of correction or services.<sup>13</sup>
2. Data indicate that less than 15 percent of preschool children receive an eye exam, and less than 22 percent of preschool children receive some type of vision screening.<sup>14</sup>
3. Research indicates a significant association between reduced visual acuity and lower early developing literacy ability among children age 4 to 5 years.<sup>15</sup>
4. The level of visual acuity significantly predicts academic performance in school-age children.<sup>16</sup>

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<sup>10</sup> Attendance Works. (2014). Attendance in the Early Grades: Why it Matters for Reading. February.

<sup>11</sup> Georgia Department of Education. (2016).

<sup>12</sup> Ad Council. (2016). New Research Shows Nearly Half of American Parents Underestimate the Harm of School Absences. Ipsos Public Affairs

<sup>13</sup> Centers for Disease Control and Prevention. (2006). Improving the Nation’s Vision Health: A Coordinated Public Health Approach: Atlanta, GA.

<sup>14</sup> Ibid.

<sup>15</sup> Bruce, A., Fairley, L., Chambers, B., Wright, J., & Sheldon, T. (2016). Impact of visual acuity on developing literacy at age 4-5 years: a cohort-nested cross-sectional study. *British Medical Journal*.

<sup>16</sup> Maples, W.C. (2003). Visual factors that significantly impact academic performance. *Optometry*, January.

5. Research comparing visually-impaired 11-year-old children to their sighted peers found that visually-impaired children are at significantly higher risk of having mental health problems.<sup>17</sup>
6. Research indicates that less than half of preschool-age children who failed a vision screening exam were referred for diagnostic exams.<sup>18</sup>

### Hearing

1. 14.9 percent of children between the ages of 6 and 19 have a hearing loss that is significant enough to put them at risk of failing at least one grade level.<sup>19</sup>
2. Research indicates that children with even minimal hearing loss are ten times more likely to suffer academic difficulties than their counterparts, including significant increased likelihood of repeating grades.<sup>20</sup>

### Oral Health

1. Tooth decay is the No. 1 chronic disease in children—5 times more frequent than asthma and 7 times more frequent than hay fever.<sup>21</sup>
2. Research shows that children with tooth decay in their primary teeth are significantly more likely to develop tooth decay in their permanent teeth.<sup>22</sup>
3. Children with poor oral health are almost 3 times more likely than their counterparts to miss school because of dental pain. Moreover, absences due to pain were associated with poorer school performance, while absences for routine oral health care were not.<sup>23</sup>
4. In Georgia, 44 percent of children 2-5 years of age and 52 percent of third graders have experienced tooth decay.<sup>24</sup>
5. Georgia has 16 counties without a dentist and 35 counties that do not accept Medicaid patients.<sup>25</sup>

### Nutrition and Physical Activity

1. Access to nutrition (food necessary for health and growth) can enhance a student's psychosocial well-being, reduce aggression, decrease discipline problems, and improve academic outcomes.<sup>26</sup>

<sup>17</sup> Harris, J., Lord, C. (2016). Mental health of children with vision impairment at 11 years of age. *Journal of Developmental Medicine and Child Neurology*.

<sup>18</sup> National Center for Children's Vision and Eye Health. (2016). *Children's Vision and Eye Health: A Snapshot of Current National Issues*.

<sup>19</sup> Packer, L. (2015). How hearing loss affects school performance. *Healthy Hearing*.

<sup>20</sup> American Speech Language and Hearing Association (2004). Even Minimal, Undetected Hearing Loss Hurts Academic Performance. *ScienceDaily*.

<sup>21</sup> Benjamin, R.M. (2010). Oral Health: The Silent Epidemic. *Public Health Reports*, March-April.

<sup>22</sup> Li, Y., Wang, W. (2002). Predicting Caries in Permanent Teeth from Caries in Primary Teeth: An Eight-year Cohort Study. *Journal of Dental Research*.

<sup>23</sup> Jackson, S.L., Vann, W.F., Kotch, J.B., Pahel, B.T., Lee, J.L. (2011). Impact of Poor Oral Health on Children's School Attendance and Performance. *American Journal of Public Health*. October.

<sup>24</sup> Kabore, H.J., Smith C., Bernal J., Parker D., Csukas S., Chapple-McGruder T. (2014) *The Burden of Oral Health in Georgia*. Georgia Department of Public Health, Maternal and Child Health, Office of MCH Epidemiology, Georgia Oral Health Program.

<sup>25</sup> Georgia Health Policy Center. (2012). A Study of Georgia's Dental Workforce 2012. Andrew Young School of Policy Studies, Georgia State University.

<sup>26</sup> Stuber, N. (2014). Nutrition and Students' Academic Performance. Wilder Research.

2. Research shows that 20 percent of children under the age of 6 in the US live in food insecure households.<sup>27</sup>
3. There is substantial evidence that physical activity helps improve academic achievement, including grades and standardized test scores.<sup>28</sup>
4. Only 42 percent of children aged 6 to 11 years obtain the recommended 60-minutes per day of physical activity (Mahar, 2011).<sup>29</sup>
5. Research analyzing the impact of recess on behavior of 8- to 9-year-old students found that having at least one daily recess period of more than 15 minutes in length was associated with better teacher's rating of class behavior compared to students with no or minimal break.<sup>30</sup>
6. Children spend 65 percent of recess time being inactive. (Stellino and Sinclair, 2008).<sup>31</sup>
7. A Cobb County School District study analyzed data from the Fitnessgram assessment and found that students in the Healthy Fitness Zone for aerobic capacity scored higher in math and reading, had fewer discipline referrals, and better school attendance.<sup>32</sup>
8. Research shows that for young children, from birth through age five, physical activity improves motor skills, social skills, and brain development.<sup>33</sup>

## School and Classroom Climate

1. Georgia data show that school climate significantly impacts third grade reading proficiency.
  - Based on 2016 data there is a 31-point difference in the percent of students who achieved the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment. In schools with a School Climate Star Rating of a five, the percent of students who achieved the Proficient Learner or above level on the Georgia Milestones English Language Arts Assessment was 43.5 percent compared to only 12.7 percent in schools with a School Climate Star Rating of one.<sup>34</sup>
2. First grade classroom climate significantly and positively predicts children's behavioral engagement, which in turn predicts greater reading achievement in third grade.<sup>35</sup>

<sup>27</sup> Coleman-Jensen, A., Rabbitt, M.P., Gregory, C., Singh, A. (2015). Household Food Security in the United States in 2014. United States Department of Agriculture Economic Research Service. Economic Research Report Number 194.

<sup>28</sup> Centers for Disease Control and Prevention. (2010). The association between school based physical activity, including physical education, and academic performance. U.S. Department of Health and Human Services, Atlanta.

<sup>29</sup> Mahar, M.T. (2011). Impact of short bouts of physical activity on attention-to-task in elementary school children. *Preventive Medicine*, June.

<sup>30</sup> Barros, R.M., Silver, E.J., Stein, R.E.K. (2009). School Recess and Group Classroom Behavior. *Pediatrics*, February.

<sup>31</sup> Stellino, M.B., Sinclair, C.D. (2008). Intrinsically Motivated, Free-Time Physical Activity Considerations for Recess. *Journal of Physical Education, Recreation & Dance*.

<sup>32</sup> Cobb County School District (2015). Fitnessgram Analysis. Relationship between Aerobic Capacity, Academic Achievement, Attendance and Behavior.

<sup>33</sup> Guide 7: Increasing Physical Activity. (2014). Growing Healthy Readers: Taking Action to Support the Health Determinants of Early School Success. The Campaign for Grade-Level Reading.

<sup>34</sup> Georgia Department of Education. (2016).

<sup>35</sup> Gou, Y., Connor, C. M., Thompkins, V., & Morrison, F. J. (2011). Classroom quality and student engagement: Contributions to third grade reading skills. *Frontiers in Psychology*, July.

3. Data indicate that children who are suspended during their early school years are 10 times more likely to experience academic failure and grade retention, drop out of high school, and face incarceration than their counterparts.<sup>36</sup>
4. Year two of Georgia's Pre-K longitudinal study found that the quality of teacher-child instructional interactions was significantly higher in Pre-K than in kindergarten classrooms in the areas of Emotional Support and Classroom Organization, which illustrates the importance of developmentally-appropriate classroom climate in the early grades.<sup>37</sup>
5. A caring school climate positively affects the achievement of third and fourth grade students in both Mathematics and Reading/Language Arts.<sup>38</sup>
6. The impact of school climate extends to the social emotional health of preschoolers and is linked to their social competency.<sup>39</sup>
7. Research found that there is no link between school climate and socioeconomic status, which means that all schools regardless of the conditions of the community can have a positive school climate.<sup>40</sup>
8. Whether a school starts with high or low school climate and connectedness, and high or low achievement scores, improving that school's climate and increasing connectedness is associated with increases in student performance in reading, writing, and mathematics.<sup>41</sup>
9. Studies show that all aspects of classroom climate are significantly related to all measures of student motivation and achievement.<sup>42</sup>
10. Research provides a strong indication that a negative classroom climate, including the components that are also commonly associated with school climate can further destabilize children who already have social emotional issues and may even compromise external efforts to address the children's mental health status.<sup>43</sup>
11. Research indicates that expulsions and suspensions occur at high rates in preschool settings with the rate of expulsions three times that of students in K-12.<sup>44</sup>

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<sup>36</sup> U.S. Department Of Health And Human Services, U.S. Department Of Education. (2014). Policy Statement On Expulsion And Suspension Policies In Early Childhood Settings. .

<sup>37</sup> Ibid.

<sup>38</sup> Smallwood, G. (2014). The Impact of School Climate on the Achievement of Elementary School Students Who Are Economically Disadvantaged: A Quantitative Study. (dissertation, Tennessee State University, 2014)

<sup>39</sup> Brophy-Herb, H.E., Lee, R.E., Nievar, M.A., Stollak, G. (2007) Preschoolers' Social Competence: Relations to Family Characteristics, Teacher Behaviors, and Classroom Climate. *Journal of Applied Developmental Psychology*.

<sup>40</sup> Berkowitz, R., Moore, H., Astor, R.A., Benbenishty, R. (2016). A Research Synthesis of the Associations Between Socioeconomic Background, Inequality, School Climate, and Academic Achievement. *Review of Educational Research*.

<sup>41</sup> Osher, D., Spier, E., Kendziora, K., Cai, C. (2009). Improving Academic Achievement Through Improving School Climate and Student Connectedness. Presentation, American Educational Research Association Annual Meeting, San Diego.

<sup>42</sup> Anderson, A., Hamilton, R.J., Hattie, J. (2004). Classroom Climate and Motivated Behavior in Secondary Schools. *Learning Environment Research*.

<sup>43</sup> Somersalo, H., Solantaus, T., Almqvist, F. (2002). Classroom Climate and the Mental Health of Primary School Children. *Nordic Journal of Psychiatry*.

<sup>44</sup> U.S. Department Of Health And Human Services, U.S. Department Of Education. (2014). Policy Statement On Expulsion And Suspension Policies In Early Childhood Settings.



12. Research shows that an 8-point increase in reading scores in kindergarten and first grade resulted in a 23 percent decreased risk of conduct problems 30 months later, illustrating that reading problems may contribute to the early onset of conduct disorder.<sup>45</sup>

## Language Development

1. Language development is the foundation for social, emotional, and mental health development and academic ability.<sup>46</sup>
2. Children with language delays have poorer behavior regulation in kindergarten than children with typically developing language.<sup>47</sup>
3. Children with larger oral vocabularies at age two are more prepared academically and behaviorally at kindergarten entry, with greater achievement in reading and math, increased ability for behavioral self-regulation, and fewer problem behaviors.<sup>48</sup>
4. Research shows that from birth to age 3 children from low-income families hear approximately 600 words per hour compared to 2,000 words per hour heard by children in higher-income families resulting in disparities in language and cognitive outcomes for children as young as 18 months old.<sup>49</sup>
5. Young children's vocabulary development is dependent on the quantity and quality of language input that parents provide directly to their children beginning infancy, the variation of which explains a substantial portion of the income-related differences in children's early oral language skills.<sup>50</sup>
6. Vocabulary at 3 years of age significantly predicts language skills at 9 and 10 years of age.<sup>51</sup>
7. In Georgia, only 44 percent of children ages 0-5 are read to every day by family members and 11.7 percent were read to less than three days per week.<sup>52</sup>
8. Research indicates that children who are read to frequently have larger vocabularies, greater language complexity, more advanced language comprehension skills, and better cognitive outcomes than children who are not read to or are read to infrequently.<sup>53</sup>

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<sup>45</sup> Bennett, K.J., Brown, K.S., Boyle, M., Racine, Y. Offord, D. (2003). Does low reading achievement at school entry cause conduct problems? *Social Science & Medicine*.

<sup>46</sup> Hollo, A. (2012). Language and Behavior Disorders in School-Age Children: Comorbidity and Communication in the Classroom. Perspectives on School-Based Issues: American Speech-Language Hearing Association.

<sup>47</sup> Aro, T., Laakso, M., Määttä, S., Tolvanen, A., Poikkeus, A. (2014). Associations between Toddler-age Communication and Kindergarten-age Self-regulatory Skills. *Journal of Speech, Language, and Hearing Research*.

<sup>48</sup> Morgan, P.L., Farkas, G., Hillemeier, M.M., Hammer, C.S., Maczuga, S. (2015). 24-Month-Old Children With Larger Oral Vocabularies Display Greater Academic and Behavioral Functioning at Kindergarten Entry. *Child Development*, September/October.

<sup>49</sup> Hart, B., & Risley, T. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore, MD:

<sup>50</sup> Rowe, M. L., Suskind, D., & Hoff, E. (October 2013). Early language gaps: Sources and solutions. A White Paper prepared for the White House meetings on Bridging the Thirty-Million-Word Gap.

<sup>51</sup> Ilgaz, H., Hassinger-Das, B., Hirsh-Pasek, K., Golinkoff, R.M. (2014). Language for Reading. *Encyclopedia of Language Development*, SAGE Publications, Inc.

<sup>52</sup> National Survey of Children's Health. (2011-12). Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved 01/07/17 from [www.childhealthdata.org](http://www.childhealthdata.org).

<sup>53</sup> Zauche, L.H., Thul, T.A., Mahoney, A.E.D., Stapel-Wax, J.L. (2016). Influence of language nutrition on children's language and cognitive development: An integrated review. *Early Childhood Research Quarterly*, January.

9. Speech-language problems are the most frequent disability of childhood yet they are the least identified.<sup>54</sup>
10. It is estimated that 8 to 12 percent of preschool children and 12 percent of children entering school in the U.S. have some form of language impairment.<sup>55</sup>
11. Research shows the quality of teacher-child conversations in early childhood education settings predicts both the level and rate of change in vocabulary and word decoding of children as they enter into elementary school.<sup>56</sup>
12. Children with language impairment are at greater risk for social, emotional, and behavioral problems.<sup>57</sup>
13. Research shows that although language impairment is known to co-occur with mental health problems, it is likely to be unidentified in school-age children with mental health disorders.<sup>58</sup>
14. Research shows that more than 4 out of 5 (81 percent) children ages 5 to 13 years with mental health disorders also have unidentified significant language impairment.<sup>59</sup>
15. Language impairment limits children's ability to benefit from instruction, talk-based therapies, and complex behavior management plans.<sup>60</sup>
16. Research shows that children and adults with behavioral problems frequently have undiagnosed language difficulties.<sup>61</sup>
17. Children with speech and language impairment, compared to children without speech and language impairment, are:<sup>62</sup>
  - a. Five times as likely to experience neglect and physical abuse
  - b. Almost three times as likely to experience sexual abuse
  - c. Nearly seven times as likely to experience emotional maltreatment
18. Research shows that although a large proportion of children with behavior problems have underlying, unrecognized language impairment, few schools are evaluating these skills among students with disruptive behavior.<sup>63</sup>

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<sup>54</sup> Prelock, P.A., Hutchins, T., Glascoe, F.P. (2008). Speech-Language Impairment: How to Identify the Most Common and Least Diagnosed Disability of Childhood. *The Medscape Journal of Medicine*, June.

<sup>55</sup> Rvachew, S. (2010). Language development and literacy. *Encyclopedia on Early Childhood Development*. Canada, September.

<sup>56</sup> Burchinal, M.R., Feinberg-Peisner, E. (2002). Development of Academic Skills from Preschool Through Second Grade: Family and Classroom Predictors of Developmental Trajectories. *Journal of School Psychology*.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Hollo, A., Wehby, J.H., Oliver, R.M. (2014). Unidentified Language Deficits in Children with Emotional and Behavioral Disorders: A Meta-Analysis. *Journal of the Council for Exceptional Children*, January.

<sup>60</sup> Ibid.

<sup>61</sup> Tommerdahl, J., Semingson, P. (2013). Behavioral Problems in the Classroom and Underlying Language Difficulties. *Journal of Education and Training Studies*, October.

<sup>62</sup> Sullivan, P.M., Knuton, J.F. (2000). Maltreatment and disabilities: A population-based epidemiological study. *Child Abuse & Neglect*.

<sup>63</sup> Ibid.

19. Research among elementary school students receiving special education services for emotional and behavioral disorders found that nearly two-thirds of the students meet clinical criteria for language disorder. <sup>64</sup>
20. Research into the prevalence of speech, language, and communication difficulties among youth in secure detention found that more than two-thirds (66-90%) had below average language skills. The study found that because their understanding of vocabulary and grammar, they may not have the skills to benefit from talk-based therapies aimed at reducing recidivism. <sup>65</sup>
21. Research indicates that children with language impairment are at significantly higher risk for both reading disability and behavior disorder. <sup>66</sup>
22. Research shows that children with language impairment have higher rates of behavior disorder due to associated problems with reading disability. <sup>67</sup>
23. Research found that although economic, demographic, and developmental factors do not differentiate children considered psychiatrically well, behaviorally disordered, emotionally disordered, or both emotionally and behaviorally disordered, speech and language factors frequently do. The findings indicate that speech and language impairment may have a key role in the development of psychiatric disorders. <sup>68</sup>
24. There a strong association between developmental language deficits and psychiatric disorders in children. Disorders of the development of language are likely to be central to the development of human personality. Understanding and correcting deficiencies of language can improve behavior and help a child resolve at least some of his emotional dilemmas. Failing to recognize a moderate or a severe language disability will almost certainly work to a child's disadvantage in therapy, and afterward. <sup>69</sup>

## Social-Emotional Engagement

1. Creating teacher training or professional development to increase their knowledge of the benefits of positive relationships with their students can increase reading and language skills.
2. Substantial evidence indicates that a foundation in spoken language competence is crucial for achievement of academic and social-emotional engagement. <sup>70</sup>

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<sup>64</sup> Benner, G.J. (2005). Language Skills Of Elementary-Aged Children With Emotional And Behavioral Disorders. *Great Plains Research*, Fall.

<sup>65</sup> Bryan, K., Freer, J., Furlong, C. (2007). Language and communication difficulties in juvenile offenders. *International Journal of Language & Communication Disorders*, Sep-Oct.

<sup>66</sup> Tomblin, J.B., Zhang, X., Buckwalter, P. (2000). The association of reading disability, behavioral disorders, and language impairment among second-grade children. *Journal of Child Psychology and Psychiatry*, May.

<sup>67</sup> Ibid.

<sup>68</sup> Baker, L., Cantwell, D.P. (1987). Comparison of Well, Emotionally Disordered, and Behaviorally Disordered Children with Linguistic Problems. *Journal of the American Academy of Child & Adolescent Psychiatry*, March.

<sup>69</sup> Gualtieri, C.T., Koriath, U., Van Bourgondien, M., Saleeby, N. (1983). Language Disorders in Children Referred for Psychiatric Services. *Journal of the American Academy of Child Psychiatry*.

<sup>70</sup> Tomblin, B. (2010). Literacy as an Outcome of Language Development and its Impact on Children's Psychosocial and Emotional Development. *Encyclopedia on Early Childhood Development*. Canada, September.

3. Language and attention in kindergarten is a better predictor of fourth grade reading ability than is reading at kindergarten.<sup>71</sup>
4. Young children who exhibit delays in communication and social development are more likely to develop chronic behaviors that disrupt their learning.<sup>72</sup>
5. Behavior problems such as Attention Deficit Hyperactivity Disorder are common among children with reading disorder and among children with language impairment.<sup>73</sup>
6. The ability to manage emotions and behaviors and make meaningful friendships in kindergarten is linked to well-being in adulthood. A twenty-year retrospective study found that:<sup>74</sup>
  - a. For every 1-point **increase** on a 5-point scale measuring a child’s social competence in kindergarten, they were:
    - i. Twice as likely to complete college in early adulthood
    - ii. 54 percent more likely to receive a high school diploma
    - iii. 46 percent more likely to be full-time employed by age of 25
  - b. For every 1-point **decrease** on a 5-point scale measuring a child’s social competence in kindergarten, they had:
    - i. 67 percent higher likelihood of having been arrested by early adulthood
    - ii. 82 percent higher rate of marijuana use
    - iii. 82 percent higher likelihood of being in or on a waiting list for public housing

## Children’s Mental Health

1. Children’s mental health refers to the ability of children to reach developmental and emotional milestones, learn and demonstrate healthy social skills, and cope when there are problems. Children who are mentally healthy are able to function well at home, in school, and in their communities.<sup>75</sup>
2. Infant mental health refers to a child’s capacity, from birth to age three, to experience, regulate, and express emotions; develop close, secure interpersonal relationships; and explore the environment and learn—all of which is in the context of family, community, and cultural expectations for young children. Infant mental health is also referred to as healthy social–emotional development.
3. Infants and young children learn and develop in the context of interactions and engagement with the significant adults—parents and other consistent caregivers—in their lives. In the earliest years,

<sup>71</sup> Hirsh-Pasek, K. (2013). Language and literacy: Why third grade reading starts at birth. Presentation at Leading for Literacy Meeting, April.

<sup>72</sup> Conroy, M. (2004). Prevention and Early Intervention for Young Children at Risk for Emotional or Behavioral Disorders. *Fifth CCBDB Mini-Library Series: Meeting the Diverse Needs of Children and Youth with E/BD—Evidence-Based Programs and Practices*. Council for Children with Behavioral Disorders. Arlington, VA.

<sup>73</sup> Tomblin, B. (2010). Literacy as an Outcome of Language Development and its Impact on Children’s Psychosocial and Emotional Development. *Encyclopedia on Early Childhood Development*. Canada, September.

<sup>74</sup> Jones, D.E., Greenberg, M., Crowley, M. (2015). Early Social-Emotional Functioning and Public Health: The Relationship Between Kindergarten Social Competence and Future Wellness. *American Journal of Public Health*. November.

<sup>75</sup> Centers for Disease Control and Prevention.

therefore, mental health disorders often result from problems in the child's primary attachment relationship.<sup>76</sup>

4. 15.4 percent of children aged 2 to 8 years (1 out of 7) have at least one diagnosed mental, behavioral, or developmental disability.<sup>77</sup>
5. Studies show that between 80 and 97 percent of children ages 3 to 5 years with identified behavioral health needs do not receive services.<sup>78</sup>
6. 1 out of 5 children birth to 18 years of age has a diagnosable mental health disorder.<sup>79</sup>
7. Symptoms of depression and anxiety, post-traumatic stress disorder, and other mental health issues can begin to manifest in infancy and toddlerhood.<sup>80</sup>
8. Between 9.5 and 14.2 percent of children birth to 5 years of age experience significant social-emotional problems that negatively impact their functioning, development, and school readiness.<sup>81</sup>
9. Research shows that quality child care is significantly associated with reduced risk of behavior problems among 1- to 5-year-old children of mothers with maternal depression.<sup>82,83</sup>
10. Left untreated, children who experience early behavioral problems can develop more serious mental health conditions that impact their learning and achievement.<sup>84</sup>
11. Increasing numbers of young children are being expelled from child care settings because of their problem behaviors. When preschoolers are given access to mental health services, expulsions are reduced by 47 percent.<sup>85</sup>
12. In the course of the school year, children with untreated mental health problems miss as many as 18 to 22 days of school.<sup>86</sup>
13. Research comparing visually-impaired 11-year-old children to their sighted peers found that visually-impaired children are at significantly higher risk of having mental health problems.<sup>87</sup>

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<sup>76</sup> Cohen, J., Oser, C., Quigley, K. (2012). Overcoming Barriers to Providing Infant-Early Childhood Mental Health. *Zero to Three – Making It Happen*.

<sup>77</sup> Bitsko, R.H.; Holbrook, J.R.; Robinson, L.R.; Kaminski, J.W.; Ghandour, R.; Smith, C. and Peacock, G. (2016). Health Care, Family, and Community Factors Associated with Mental, Behavioral, and Developmental Disorders in Early Childhood. *MMWR*, Centers for Disease Control and Prevention.

<sup>78</sup> Cooper, J.L., Masi, R., Vick, J. (2009). Social-emotional Development in Early Childhood What Every Policymaker Should Know. National Center for Children in Poverty. Mailman School of Public Health, Columbia University.

<sup>79</sup> Disorders among Children. (2013). United States Department of Health and Human Services. The National Institute of Mental Health.

<sup>80</sup> Egger, H.L. (2006). Common Emotional and Behavioral Disorders in Preschool Children. *Journal of Child Psychology and Psychiatry*.

<sup>81</sup> Brauner, C.B. (2006). Estimating the Prevalence of Early Childhood Serious Emotional/behavioral Disorders. *Public Health Reports*.

<sup>82</sup> Charrois, J., Côté, S.M., Japel C., Séguin, J.R., Paquin, S., Tremblay, R.E., Herba, C.M. (2017). Child-care quality moderates the association between maternal depression and children's behavioural outcome. *Journal of Child Psychology and Psychiatry*, July.

<sup>83</sup> Herba, C.M., Tremblay, R.E., Boivin, M., Liu, X., Mongeau, C., Séguin, J.R., Côté, S.M. (2013). Maternal Depressive Symptoms and Children's Emotional Problems. *JAMA Psychiatry*, June.

<sup>84</sup> Perry, D., Holland, C., Darling-Kuria, N., Nadviv, S. (2011). Challenging Behavior and Expulsion From Child Care: The Role of Mental Health Consultation. *Zero to Three*.

<sup>85</sup> Perry, D.F., Dunne, M.C. McFadden, L., and Campbell, D. (2008). Reducing the Risk for Preschool Expulsion: Mental Health Consultation for Young Children with Challenging Behaviors. *Journal of Child and Family Studies*.

<sup>86</sup> Blackorby, J. (2004). Changes in school engagement and academic performance of students with disabilities. In *Wave 1 Wave 2 Overview (SEELS)*. Menlo Park, CA: SRI International.

<sup>87</sup> Harris, J., Lord, C. (2016). Mental health of children with vision impairment at 11 years of age. *Journal of Developmental Medicine and Child Neurology*.

14. Research shows that 4 out of 5 (81%) children ages 5 to 13 years with mental health disorders also have unidentified significant language impairment.<sup>88</sup>
15. The association between language impairment and children’s mental health is well-documented, with 50 percent of school-aged children with significant language delay also having diagnosable mental disorder.<sup>89</sup>
16. Children and adults with mental health issues are significantly more likely to have limited reading proficiency.<sup>90</sup>
17. Children with limited literacy are stigmatized, which complicates their efforts to interact with others and benefit from interventions.<sup>91</sup>
18. Research shows that those trained to have improved knowledge about mental health problems and are more likely to help a young person in emotional distress or crisis.<sup>92,93</sup>

### **Mental Health of Young Military-Connected Children**

1. 32 percent of children of military families scored as “high risk” for mental health problems, 2.5 times higher than the national average.<sup>94</sup>
2. The largest percentage of children of active duty members is between birth and five years of age (42 percent) followed by children who are 6 to 11 years of age (31.6 percent).<sup>95</sup>
3. Children 3 to 5 years of age with a deployed parent exhibit greater behavioral symptoms than their counterparts.<sup>96</sup>

### **Mental and Physical Health Needs of Children in Foster Care**

1. Research demonstrates that child maltreatment significantly damages children’s attachment with their primary caregiver illustrating that interventions informed by attachment theory are important to prevent enduring relational difficulties.

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<sup>88</sup> Hollo, A., Wehby, J.H., Oliver, R.M. (2014). Unidentified Language Deficits in Children with Emotional and Behavioral Disorders: A Meta-Analysis. *Journal of the Council for Exceptional Children*, January.

<sup>89</sup> Leslie, L.K., Gordon, J.N., Lambros, K., Premji, K., Peoples, J., Gist, K. (2005). Addressing the Developmental and Mental Health Needs of Young Children in Foster Care. *Journal of Developmental and Behavioral Pediatrics*, April.

<sup>90</sup> Lincoln, A., Paasche-Orlow, M.K., Cheng, D.M., Lloyd-Travaglini, C., Caruso, C., Saitz, R. and Samet, J.H. (2006). Impact of health literacy on depressive symptoms and mental-health-related: Quality of life among adults with addition. *Journal of General Internal Medicine*.

<sup>91</sup> Ibid.

<sup>92</sup> Kelly, C.M. Mithen, J.M., Fischer, J.A., Kitchener, B.A., Jorm, A.F., Lowe, A., Scanlan, A. (2011). Youth Mental Health First Aid: A Description of the Program and an Initial Evaluation. *International Journal of Mental Health Systems*.

<sup>93</sup> Aakre, J.M., Lucksted A., Browning-McNee, L.A. (2016). Evaluation of Youth Mental Health First Aid USA: A program to assist young people in psychological distress. *Psychological Services*.

<sup>94</sup> Flake, E. M.; Davis, B. E.; Johnson, P. L.; Middleton, L. S. (2009). The Psychosocial Effects of Deployment on Children. *Journal of Developmental & Behavioral Pediatrics*.

<sup>95</sup> 2015 Demographics: Profile of the Military Community. (2015). Department of Defense.

<sup>96</sup> Chartrand, M.M., Frank, D.A., White, L.F., Shope, T.R. (2008). Effect of Parents’ Wartime Deployment on the Behavior of Young Children in Military Families. *Archives of Pediatric & Adolescent Medicine*.

2. Nearly half of all children entering foster care in Georgia are under the age of six.<sup>97</sup>
3. Research shows that among young children in foster care, 57 percent demonstrate language impairment, 31 percent display gross motor difficulties, and 10 percent experience growth problems.<sup>98</sup>
4. A population-based study of more than 50,000 children found that those with speech and language impairment, compared to their counterparts, are:<sup>99</sup>
  - a. Almost seven times as likely to experience emotional maltreatment
  - b. Five times as likely to experience neglect and physical abuse
  - c. Nearly three times as likely to experience sexual abuse
5. Research shows that infants in foster care who do not receive sensitive, responsive care are at increased risk for impairments in early language development and behavioral problems.<sup>100, 101</sup>
6. Studies show that interventions aimed at increasing parent responsiveness with infants who have histories of maltreatment and disruptions in care can significantly improve early language development.<sup>102</sup>
7. Research shows that children who have been in foster care, compared to their counterparts, are:<sup>103</sup>
  - a. Seven times as likely to experience depression
  - b. Six times as likely to exhibit behavioral problems
  - c. Five times as likely to feel anxiety
  - d. Three times as likely to have attention deficit disorder, hearing impairments, and vision issues
  - e. Twice as likely to suffer from learning disabilities, developmental delays, asthma, obesity, and language impairment
8. Research has found that compared with children with no adverse childhood experiences (ACEs)—defined as stressful or traumatic events, including abuse and neglect, occurring before the age of 18—children with three or more ACEs are:
  - a. Three times more likely to fail
  - b. Five times more likely to have severe attendance problems
  - c. Six times more likely to have severe behavior problems
  - d. Four times more likely to be suspended or expelled from school
  - e. Four times more likely to have poor mental and physical health

<sup>97</sup> Georgia Division of Family and Children Services. (2016).

<sup>98</sup> Leslie, L.K., Gordon, J.N., Lambros, K., Premji, K., Peoples, J., Gist, K. (2005). Addressing the Developmental and Mental Health Needs of Young Children in Foster Care. *Journal of Developmental and Behavioral Pediatrics*, April.

<sup>99</sup> Sullivan, P.M., Knuton, J.F. (2000). Maltreatment and disabilities: A population-based epidemiological study. *Child Abuse & Neglect*.

<sup>100</sup> Bick, J., Dozier, M. (2013). The Effectiveness Of An Attachment-Based Intervention In Promoting Foster Mothers' Sensitivity Toward Foster Infants. *Infant Mental Health Journal*, March.

<sup>101</sup> Bernard, K., Hyoeun, A., Dozier, M. (2017). Effects of the ABC Intervention on Foster Children's Receptive Vocabulary: Follow-Up Results From a Randomized Clinical Trial. *Child Maltreatment*, February.

<sup>102</sup> Ibid.

<sup>103</sup> Turney, K., Wildeman, C. (2016). Mental and Physical Health of Children in Foster Care. *Pediatrics*, November.

- f. Four times more likely to drop out of school
- g. Three times more likely to have receptive & expressive language problems
- h. Three times more likely to have suicide ideation
- i. Three times more likely to be arrested

## Birth Outcomes

1. Research shows that compared with children born  $\geq 37$  weeks, children born at 34-36 weeks are at:  
104
  - a. 36 percent increased risk for developmental delay or disability
  - b. 19 percent higher risk for suspension in kindergarten
  - c. 10 to 13 percent increased risk for disability in prekindergarten at 3 and 4 years of age, special education placement, and retention in kindergarten
2. A baby's brain at 35 weeks gestation weighs only two-thirds of what it will weigh at 39 to 40 weeks.  
105
3. In a major study of more than 128,000 infants, the analysis found that those delivered at:  
106
  - a. 40 weeks have a 3 percent risk of severe reading impairment in third grade
  - b. 39 weeks have a 6 percent risk of severe reading impairment in third grade
  - c. 38 weeks have a 12 percent risk of severe reading impairment in third grade
  - d. 37 weeks have a 33 percent risk of severe reading impairment in third grade
4. Research shows that at 6 months of age, the brains of babies born at term respond both to what babies see and what babies expect to see, signaling that they are learning from their experiences. However, 6-month-old babies born at <33 weeks gestation do not exhibit this type of brain response to expectations—known as top-down sensory prediction—illustrating that early prediction ability is critical for children's development and that deficits help explain why preterm infants experience altered developmental trajectories and are more likely to have poor developmental outcomes.  
107
5. Research shows that compared with children born at term, those born between 34–36 weeks have a 70 percent increased risk of clinically verified Attention Deficit Hyperactivity Disorder.  
108
6. Additional research has found that children born before 34 weeks are almost three times as likely to develop clinically verified Attention Deficit Hyperactivity Disorder compared with children born at term.  
109

<sup>104</sup> Morse, S.B., Zheng, H., Tang, Y., Roth, J. (2009). Early School-Age Outcomes of Late Preterm Infants. *Pediatrics*, April.

<sup>105</sup> Eunice Kennedy Shriver National Institute of Child Health and Human Development. (2013). Carrying Pregnancy to 39 Weeks: Is It Worth It? Yes! *National Institutes of Health*.

<sup>106</sup> Noble, K.G., Fifer, W.P., Rauh, V.A., Nomura, Y., Andrews, H.F. (2012). Academic Achievement Varies With Gestational Age Among Children Born at Term. *Pediatrics*, August.

<sup>107</sup> Emberson, L.L., Boldin, A.M., Riccio, J.E., Guillet, R., Aslin, R.N. (2017). Deficits in Top-Down Sensory Prediction in Infants At Risk due to Premature Birth. *Current Biology*, February.

<sup>108</sup> Linnet, K.M., Wisborg, K., Agerbo, E., Secher, N.J., Thomsen, P.H., Henriksen, T.B. (2006). Gestational age, birth weight, and the risk of hyperkinetic disorder. *Archives of Disease in Childhood*.

<sup>109</sup> Ibid.



7. A population-based study of more than 10,000 children age 3-19 years of age diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) found that:<sup>110</sup>
  - a. The average age of diagnosis was 7.6 years
  - b. Compared to children born at 40 weeks, children who were born at:
    - i. 25 weeks were almost six times more likely to be diagnosed with ADHD
    - ii. 30 weeks were more than three and a half times more likely to be diagnosed with ADHD
    - iii. 35 weeks had a 41 percent increased risk of being diagnosed with ADHD
    - iv. 36 weeks had a 31 percent increased risk of being diagnosed with ADHD
    - v. 38 weeks had a 12 percent increased risk of being diagnosed with ADHD
    - vi. 39 weeks had an 8 percent increased risk of being diagnosed with ADHD
8. A national cohort study of children born extremely preterm **but without severe neurodevelopmental disorders** were found to have higher rates of adverse mental health outcomes. Compared to their counterparts, they were:<sup>111</sup>
  - a. **two to eight times more likely** to have symptoms of inattention and hyperactivity/impulsivity, anxiety, or obsessive-compulsive disorder and
  - b. **4.5 times as likely to have at least one mental health problem.**

### Early Childhood Education

1. Substantial evidence indicates that a year or two of developmentally appropriate early childhood education for three- and four-year-olds will improve children's early language, literacy, and mathematics skills.<sup>112, 113</sup>
2. Results from year two of Georgia's Pre-K longitudinal study indicate that children who attended Pre-K made significant gains in language/literacy skills, math skills, self-knowledge and social skills.<sup>114</sup>
3. Research shows that disadvantaged children who participated in high-quality early learning programs had higher test scores, decreased grade retention, and fewer referrals for special education. As adults, they were significantly less likely to be diagnosed with chronic disease, including cardiovascular disease and diabetes, and their earnings were increased by 25 percent resulting in wages comparable to their more advantaged peers.<sup>115</sup>

<sup>110</sup> Sucksdorff, M., Lehtonen, L., Chudal, R., Suominen, A., Joelsson, P., Gissler, M., Sourander, A. (2015). Preterm Birth and Poor Fetal Growth as Risk Factors of Attention-Deficit/Hyperactivity Disorder. *Pediatrics*, September.

<sup>111</sup> Fevang, S.K.E., Hysing, M., Markestad, T., Sommerfelt, K. (2016). Mental Health in Children Born Extremely Preterm Without Severe Neurodevelopmental Disabilities. *Pediatrics*, March.

<sup>112</sup> Camilli, G., Vargas, S., Ryan, S., & Barnett, W. S. (2010). Meta-analysis of the effects of early education interventions on cognitive and social development. *The Teachers College Record*.

<sup>113</sup> Wong, V. C., Cook, T. D., Barnett, W. S., & Jung, K. (2008). An effectiveness-based evaluation of five state prekindergarten programs. *Journal of Policy Analysis and Management*.

<sup>114</sup> Peisner-Feinberg, E. S., Garwood, J. D., & Mokrova, I. L. (2016). Children's Outcomes and Classroom Quality from Pre-K through Kindergarten: Findings from Year 2 of Georgia's Pre-K Longitudinal Study. Executive Summary. Chapel Hill, NC: The University of North Carolina, FPG Child Development Institute.

<sup>115</sup> Rickman, D., Kokenes, C.D. (2016). Top Ten Issues to Watch in 2017. Georgia Partnership for Excellence in Education.

4. Research shows that quality child care is significantly associated with reduced risk of behavior problems among 1- to 5-year-old children of mothers with maternal depression.<sup>116,117</sup>
5. Research shows the quality of teacher-child conversations in early childhood education settings predicts both the level and rate of change in vocabulary and word decoding of children as they enter elementary school.<sup>118</sup>
6. An analysis of the economic impact of the early care and education industry in Georgia found that it generated \$4.7 billion dollars of economic activity in the state during 2013 and that the amount of parents' annual earnings supported by the availability of child care in Georgia is estimated, conservatively, at \$24 billion dollars.<sup>119</sup>
7. Percent of children who attend licensed childcare settings in Georgia, by age:<sup>120</sup>
  - a. 6 weeks - 12 months: 15.7 percent
  - b. 1 year olds: 24.8 percent
  - c. 2 year olds: 24.9 percent
  - d. 3 year olds: 43.6 percent
  - e. 4 year olds: 86.6 percent

### Summer Learning Loss and Out-of-School Time Learning

1. Low-income children fall further behind academically during the summer by as much as two months of reading achievement, while other children make slight gains because of the lack of learning opportunities and access to books and less interaction with other students.<sup>121</sup>
2. By the end of fifth grade, low-income students are almost three grade-levels behind in reading compared to their more affluent peers due in large part to summer learning loss.<sup>122</sup>
3. Studies show that all types of summer programs—whether voluntary, mandatory, or programs that encourage students to read at home in the summer—can mitigate summer learning losses and even lead to achievement gains.<sup>123</sup>
4. Longitudinal studies of summer programs have found that the positive effects of summer learning programs persist for at least two years after the student has participated in the summer program.<sup>124</sup>

<sup>116</sup> Charrois, J., Côté, S.M., Japel C., Séguin, J.R., Paquin, S., Tremblay, R.E., Herba, C.M. (2017). Child-care quality moderates the association between maternal depression and children's behavioural outcome. *Journal of Child Psychology and Psychiatry*, July.

<sup>117</sup> Perry, D., Holland, C., Darling-Kuria, N., Nadiv, S. (2011). Challenging Behavior and Expulsion From Child Care: The Role of Mental Health Consultation. *Zero to Three*.

<sup>118</sup> Burchinal, M.R., Feinberg-Peisner, E. (2002). Development of Academic Skills from Preschool Through Second Grade: Family and Classroom Predictors of Developmental Trajectories. *Journal of School Psychology*.

<sup>119</sup> Georgia State University, Andrew Young School of Policy Studies. (2016). Economic Impact of the Early Care and Education Industry in Georgia.

<sup>120</sup> Ibid.

<sup>121</sup> Alexander, K., Entwisle, D., Olson, L. (2007). Lasting Consequences of the Summer Learning Gap. *American Sociological Review*.

<sup>122</sup> Cooper, H., Borman, G., Fairchild, R. (2010). School Calendars and Academic Achievement. *Handbook of Research on Schools, Schooling, and Human Development*. NJ: Erlbaum.

<sup>123</sup> McCombs, J.S., Augustine, C.H., Schwartz, H.L., Bodilly, S.J., McInnis, B., Lichter, D.S., & Cross, A.B. (2011). Making Summer Count: How Summer Programs Can Boost Children's Learning. RAND Education. New York: The Wallace Foundation.

<sup>124</sup> Ibid.

5. Research shows that high quality afterschool programs accelerate student achievement and development through improved school attendance, increased positive social behaviors, reduced problem behavior in school, and improved school grades and test scores.<sup>125</sup>
6. Research shows that afterschool programming increases academic achievement, promotes civic and social development, and reduces risk taking behaviors and that students who are furthest behind gain the most from afterschool academic enrichments.<sup>126</sup>
7. Research indicates that consistent participation in afterschool activities yields positive youth outcomes, including improved academic performance, gains in self-efficacy, and reduced school absences.<sup>127</sup>

## Adult Literacy

1. Research shows that one of the best ways of ensuring children are successful in school is by addressing the literacy needs of the adults in their lives.<sup>128</sup>
2. Research shows there is a direct link between parents' education level and children's academic achievement and that the most significant predictor of children's literacy is their mother's literacy level.<sup>129</sup>
3. Although children of parents with less than a high school education are more likely to perform poorest on reading tests, a review of 67 research studies found that when parents spend time in adult literacy programs that improve their reading skills their children attend school more regularly, perform better academically, and are more likely to graduate.<sup>130</sup>

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<sup>125</sup> Durlak, J.A., Weissberg, R.P. (2012). Afterschool programs that follow evidence-based practices to promote social and emotional development are effective. Flint, MI: Expanded Learning and Afterschool Project. Retrieved April 10, 2012, from [http://www.expandinglearning.org/docs/Durlak&Weissberg\\_Final.pdf](http://www.expandinglearning.org/docs/Durlak&Weissberg_Final.pdf).

<sup>126</sup> Lopez, M. E. (2015). Leave them wanting more: Engaging youth in afterschool. Cambridge, MA: Harvard Family Research Project.

<sup>127</sup> Auger, A., Pierce, K. M., Vandell, D. L. (April, 2013). Participation in Out-of-School Settings and Student Academic and Behavioral Outcomes. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

<sup>128</sup> ProLiteracy America. (2003). U.S. Adult Literacy Programs: Making a Difference. *A Review of Research on Positive Outcomes Achieved by Literacy Programs and the People They Serve*.

<sup>129</sup> Ibid.

<sup>130</sup> Ibid.

## IV. Examples of Actions That Can Support Children’s Ability to Read

Research shows that intervention and prevention strategies can successfully address many of the underlying factors that affect children’s ability to read.

### Attendance

1. Implement research-based approaches to improve school climate which have been shown to improve student attendance.<sup>131</sup>
2. Attendance rates are higher in schools where parents feel welcomed and engaged and where they trust their children are safe.<sup>132</sup>
3. Increase awareness among parents about the effects of absenteeism and how quickly absences impact academic outcomes in the early grades.<sup>133</sup>
4. Support school-based telemedicine programs which have been shown to increase access for children not otherwise receiving primary care, provide an early means of evaluation and intervention, reduce overall use of higher levels of care, including the emergency room, and improve attendance.<sup>134</sup>
5. Analyze attendance data to identify the needs of students as well as the causes in order to target resources. Information about the concentration and severity of absenteeism sheds light on the intensity and nature of supports required.<sup>135</sup>

### Physical Health

#### Vision

1. A National Expert Panel convened by the National Center for Children’s Vision and Eye Health recommends annual vision screenings (best practice) or at least once (acceptable minimum standard) between the ages of 3 and 6 years, and periodically throughout the school years for children who do not receive comprehensive eye exams.<sup>136</sup>
2. It is recommended that children who have any of the following risk conditions, placing them at risk of vision disorders, should be referred directly to an eye care professional:<sup>137</sup>
  - a. Children born before 32 weeks of gestation
  - b. Children with neurodevelopmental disorders
  - c. Children with systemic diseases associated with vision problems
  - d. Children who have an immediate relative with strabismus or amblyopia

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<sup>131</sup> Chen, G., Weikert, L.A. (2008). Student Background, School Climate, School Disorder, and Student Achievement: An Empirical Study of New York City’s Middle Schools. *Journal of School Violence*.

<sup>132</sup> Attendance Works. (2014). Attendance in the Early Grades: Why it Matters for Reading. February.

<sup>133</sup> Ibid.

<sup>134</sup> Committee on Pediatric Workforce. (2015). The Use of Telemedicine to Address Access and Physician Workforce Shortages. *Pediatrics*, July.

<sup>135</sup> Attendance Works and Johns Hopkins University on behalf of the Everyone Graduates Center. (2016). Preventing Missed Opportunity: Taking Collective Action to Confront Chronic Absence.

<sup>136</sup> National Center for Children’s Vision and Eye Health. (2016). *Children’s Vision and Eye Health: A Snapshot of Current National Issues*.

<sup>137</sup> Ibid.

- e. Children with noticeable abnormalities such as crossed eyes (strabismus) or droopy eyelids (ptosis)
- f. Children whose parents are concerned about their vision

## Hearing

1. Because Increase parental/doctor awareness in hearing loss intervention strategies to better child language development.
2. For school age children, the American Academy of Pediatrics recommends that hearing screening be conducted:<sup>138</sup>
  - a. At school entry for all children
  - b. At least once at ages 6, 8, and 10
  - c. At least once during middle school
  - d. At least once during high school
  - e. For any student entering a new school system without evidence of a previous hearing screening
3. Increase parental/doctor awareness in hearing loss intervention strategies to better child language development.
4. For infants and young children, the American Academy of Pediatrics recommends:<sup>139</sup>
  - a. All infants receive a hearing screening screened at no later than 1 month of age. Those who do not pass screening should have a comprehensive audiological evaluation at no later than 3 months of age. Infants with confirmed hearing loss receive appropriate intervention at no later than 6 months of age from health care and education professionals with expertise in hearing loss and deafness in infants and young children.
  - b. Regardless of previous hearing-screening outcomes, it is recommended that all infants receive ongoing surveillance of communicative development beginning at 2 months of age during well-child visits.

## Oral Health

1. Increase children's access to pediatric dental care because the first dental visit is recommended by age 1.<sup>140</sup>

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<sup>138</sup> Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion. (2015). Promoting Hearing Health in Schools. Centers for Disease Control and Prevention, Atlanta.

<sup>139</sup> Joint Committee on Infant Hearing. (2007). Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. *Pediatrics*, October.

<sup>140</sup> Clinical Affairs Committee – Infant Oral Health Subcommittee. (2014). Guideline on Infant Oral Health Care. Clinical Practice Guidelines, American Academy of Pediatric Dentistry.

2. Train teachers, students, and parents about the importance of oral hygiene and care because childhood tooth decay is preventable through knowledge of how bacterial infections are spread, proper personal hygiene, good nutritional habits, and regular dental care.<sup>141</sup>
3. Inform parents that fluoride varnish can prevent tooth decay because research supports the use of fluoride varnish to prevent early childhood tooth decay and a dental assessment by a child's first birthday or first tooth eruption. The effectiveness of fluoride varnish in this age group provides additional justification for an early dental visit, since the application of fluoride varnish at this first visit will help reduce future disease.<sup>142</sup>

### **Nutrition and Physical Activity**

1. Encourage schools to increase time for physical activity through efforts such as *Power Up for 30*, which seamlessly integrates 30 minutes of physical activity into the school day.<sup>143</sup>
2. Promote training and support for good nutrition and physical activity in childcare centers through efforts such as *Growing Fit* training for early care educators in wellness policy development and practices.<sup>144</sup>

### **School and Classroom Climate**

1. Because of the preponderance of evidence supporting the implementation of Positive Behavioral Interventions and Supports (PBIS) as a model for improving school climate, continue and expand investments for full-time school climate specialists in Georgia's Regional Education Service Agencies.<sup>145</sup>
2. Embed developmentally-appropriate (age-appropriate) PBIS classroom practice components from the Pyramid Model of PBIS into school-wide PBIS Tier 1 training for elementary schools to increase K-3 teachers, support staff, and administrators ability to support broader ranges of developmental needs of children in classrooms.<sup>146</sup>
3. Research shows that implementation of PBIS has positive outcomes at the school-wide level, but it also allows staff to focus more time on individual students with specific needs.<sup>147</sup>

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<sup>141</sup> Kabore, H.J., Smith C., Bernal J., Parker D., Csukas S., Chapple-McGruder T. (2014) *The Burden of Oral Health in Georgia*. Georgia Department of Public Health, Maternal and Child Health, Office of MCH Epidemiology, Georgia Oral Health Program.

<sup>142</sup> Weintraub, J.A., Ramoz-Gomez, F., Jue, B., Shain, S., Hoover, C.I., Featherstone, J.D.B., Gansky, S.A. (2006). Fluoride Varnish Efficacy in Preventing Early Childhood Caries. *Journal of Dental Research*.

<sup>143</sup> Georgia SHAPE. *Power Up for 30*. Georgia Department of Public Health.

<sup>144</sup> McDavid, K., Piedrahita, C., Hashima, P., Vall, E.A., Kay, C., O'Connor, J. (2016). Growing Fit: Georgia's model for engaging early care environments in preventing childhood obesity. *Journal of the Georgia Public Health Association*.

<sup>145</sup> Sugai, G. and Horner, R.H. (2008). What We Know and Need to Know about Preventing Problem Behavior in Schools. *Exceptionality Journal*.

<sup>146</sup> Bitsko, R.H.; Holbrook, J.R.; Robinson, L.R.; Kaminski, J.W.; Ghandour, R.; Smith, C. and Peacock, G. (2016). Health Care, Family, and Community Factors Associated with Mental, Behavioral, and Developmental Disorders in Early Childhood, *MMWR*.

<sup>147</sup> Eber, L. Lewis-Palmer, T. Pacchiano, D. (2012). School-wide Positive Behavior Systems: Improving School Environments for All Students Including Those with EBD. Paper presented at the System of Care for Children's Mental Health Conference, Tampa, February.

4. Expand investments to implement the Pyramid Model of PBIS in early learning centers to support the social, emotional, intellectual, and behavioral development and link to K-3 grades to create a continuity of positive learning climates.<sup>148</sup>
5. Provide PBIS training for schools in grade bands because students in K-5 and 6-12 are different developmentally.
6. Create an elementary school specific booster training that addresses the need for developmentally/age-appropriate PBIS classroom practices for schools that have been implementing PBIS—trainers from DECAL, GaDOE, and RESA.
7. Provide coaching for teachers in Social Emotional Engagement—Knowledge and Skills, already implemented in almost 30 school districts, including Pre-K and Head Start classrooms. This approach helps educators integrate social-emotional engagement strategies into lesson plans they are already teaching that enhance the positive interaction between and among students and teachers.<sup>149</sup>
8. Diversify school climate expertise to better assist students with needs that are different developmentally. Look at a balance of RESA school climate specialists across grade bands—some with K-5 expertise and some with 6-12 expertise.
9. Facilitate professional learning communities of teachers and administrators across the early childhood through third grade continuum so that:
  - classrooms reflect developmentally/age-appropriate expectations and
  - instruction is delivered in ways that are engaging and support children’s social-emotional development and executive functioning skills.

## Language Development

1. Strengthen efforts to identify and serve children with slow expressive language development need speech-language therapy because immediate referral to a speech-language pathologist is recommended for children.<sup>150</sup>
2. Provide speech and language assessment and therapy for children and youth in foster care and juvenile justice because these populations are shown by research to have significantly higher rates of language and communication disorders compared to their counterparts.<sup>151, 152</sup>
3. Leverage speech therapy as an allowable service to be delivered via telemedicine and expand utilization in schools and other settings to identify and treat children with language impairment.<sup>153</sup>

<sup>148</sup> Georgia House Study Committee on Mental Health Access Final Report. (2013).

<sup>149</sup> Social Emotional Engagement – Knowledge and Skills, Georgia Department of Education and the Marcus Center.

<sup>150</sup> Dale, P.S., Patterson, J.L. (2009). Early Identification of Language Delay. *Language Development and Literacy*, Canada.

<sup>151</sup> Bryan K., Freer J. Furlong C. (2007). Language and communication difficulties in juvenile offenders. *International Journal of Language and Communication Disorders*, Sep-Oct.

<sup>152</sup> Leslie, L.K., Gordon, J.N., Lambros, K., Premji, K., Peoples, J., Gist, K. (2005). Addressing the Developmental and Mental Health Needs of Young Children in Foster Care. *Journal of Developmental and Behavioral Pediatrics*, April.

<sup>153</sup> Georgia Department of Community Health, Division of Medicaid. (2017). Telemedicine Guidance.

4. There a strong association between developmental language deficits and psychiatric disorders in children. Disorders of the development of language are likely to be central to the development of human personality. Understanding and correcting deficiencies of language can improve behavior and help a child resolve at least some of his emotional dilemmas. Failing to recognize a moderate or a severe language disability will almost certainly work to a child's disadvantage in therapy, and afterward.<sup>154</sup>
5. Provide Language Nutrition coaching for parents and caregivers of very young children through myriad approaches, such as the expansion of *Talk With Me Baby* training for nurses, physicians, WIC nutritionists, medical assistants, foster parents, speech-language pathologists, and other workforces and groups already reaching almost every parent and baby<sup>155</sup> and promotion of the *Talk With Me Baby* video modules for child care teachers on the *Read Right From the Start* online training platform.<sup>156</sup>
6. Support institutions of higher education efforts to integrate the concept of Language Nutrition coaching in preparation programs for nurses, physicians, medical assistants, nutritionists, early childhood educators, social workers, speech-language pathologists, and K-12 teachers.
7. Promote parent-child book reading ("shared reading"). Research shows that reading aloud to young children fosters the development of language and other early literacy skills, which in turn help children prepare for school.<sup>157</sup>
8. Promote parent-centered interventions aimed at increasing parental knowledge of child development and understanding of the importance of using a large amount of high-quality, child-directed speech. This positively influences how parents communicate with their children thereby improving language development, regardless of income.<sup>158</sup>
9. Promote reading with children during infancy and preschool years which is predictive of higher language skills at school entry and with childhood literacy acquisition.<sup>159</sup>
10. Strengthen efforts to identify and serve children with slow expressive language development need speech-language therapy because immediate referral to a speech-language pathologist is recommended for children.<sup>160</sup>
11. Provide speech and language assessment and therapy for children and youth in foster care and juvenile justice because these populations are shown by research to have significantly higher rates of language and communication disorders compared to their counterparts.<sup>161, 162</sup>

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<sup>154</sup> Gualtieri, C.T., Koriath, U., Van Bourgondien, M., Saleeby, N. (1983). Language Disorders in Children Referred for Psychiatric Services. *Journal of the American Academy of Child Psychiatry*.

<sup>155</sup> Talk With Me Baby, [www.talkwithmehome.com](http://www.talkwithmehome.com)

<sup>156</sup> Read Right From the Start, [www.readrightfromthestart.org](http://www.readrightfromthestart.org)

<sup>157</sup> Duursma, E., Augustyn, M. Zuckerman, B. (2008). Reading aloud to children: the evidence. *Archives of Disease in Childhood*, July.

<sup>158</sup> Rowe, M. L. (2008). Child-directed speech: relation to socioeconomic status, knowledge of child development and child vocabulary skill. *Journal of Child Language*.

<sup>159</sup> Ibid.

<sup>160</sup> Dale, P.S., Patterson, J.L. (2009). Early Identification of Language Delay. *Language Development and Literacy*, Canada.

<sup>161</sup> Bryan K., Freer J. Furlong C. (2007). Language and communication difficulties in juvenile offenders. *International Journal of Language and Communication Disorders*, Sep-Oct.

<sup>162</sup> Leslie, L.K., Gordon, J.N., Lambros, K., Premji, K., Peoples, J., Gist, K. (2005). Addressing the Developmental and Mental Health Needs of Young Children in Foster Care. *Journal of Developmental and Behavioral Pediatrics*, April.



12. Leverage speech therapy as an allowable service to be delivered via telemedicine and expand utilization in schools and other settings to identify and treat children with language impairment.<sup>163</sup>
13. There a strong association between developmental language deficits and psychiatric disorders in children. Disorders of the development of language are likely to be central to the development of human personality. Understanding and correcting deficiencies of language can improve behavior and help a child resolve at least some of his emotional dilemmas. Failing to recognize a moderate or a severe language disability will almost certainly work to a child’s disadvantage in therapy, and afterward.<sup>164</sup>
14. Provide Language Nutrition coaching for parents and caregivers of very young children through myriad approaches, such as the expansion of *Talk With Me Baby* training for nurses, physicians, WIC nutritionists, medical assistants, foster parents, speech-language pathologists, and other workforces and groups already reaching almost every parent and baby<sup>165</sup> and promotion of the *Talk With Me Baby* video modules for child care teachers on the *Read Right From the Start* online training platform.<sup>166</sup>
15. Support institutions of higher education efforts to integrate the concept of Language Nutrition coaching in preparation programs for nurses, physicians, medical assistants, nutritionists, early childhood educators, social workers, speech-language pathologists, and K-12 teachers.
16. Support programs that promote reading with children age birth to five and that provide increased access to books for this age group, such as *Reach Out and Read*, *Ferst Books*, *1,000 Books B4 Kindergarten*, etc.

### Social-Emotional Engagement

1. Yale School of Medicine’s Child Study Center study found that social emotional learning and school climate are interrelated, indicating that research-based approaches to improve school climate positively impact social-emotional learning.<sup>167</sup>
2. Expand implementation of the Pyramid Model of PBIS that provides early childhood teachers with training and support to maintain emotionally positive and cognitively enriching classrooms.<sup>168</sup>
3. Provide Social Emotional Engagement—Knowledge and Skills coaching for teachers, currently implemented in almost 30 Georgia school districts, including Pre-K and Head Start classrooms. This approach helps educators integrate social-emotional engagement strategies into existing lesson plans that enhance the positive interaction between and among students and teachers.<sup>169</sup>

<sup>163</sup> Georgia Department of Community Health, Division of Medicaid. (2017). Telemedicine Guidance.

<sup>164</sup> Gualtieri, C.T., Koriath, U., Van Bourgondien, M., Saleeby, N. (1983). Language Disorders in Children Referred for Psychiatric Services. *Journal of the American Academy of Child Psychiatry*.

<sup>165</sup> Talk With Me Baby, [www.talkwithmehome.org](http://www.talkwithmehome.org)

<sup>166</sup> Read Right From the Start, [www.readrightfromthestart.org](http://www.readrightfromthestart.org)

<sup>167</sup> G.W., Malloy, C.E., Malloy, W. (2001). *The Kids Got Smarter: Case Studies of Successful Comer Schools*, Hampton Press:

<sup>168</sup> Fox, L., Dunlap, G., Hemmeter, M.L., Joseph, G.E., Strain, P.S. (2003). The Teaching Pyramid: A Model for Supporting Social Competence and Preventing Challenging Behavior in Young Children. *Young Children*, July.

<sup>169</sup> Social Emotional Engagement – Knowledge and Skills, Georgia Department of Education and the Marcus Center.

## Children’s Mental Health

1. Because of the the high prevalence of language impairment among children with emotional and behavioral disorders:<sup>170</sup>
  - Provide language screening for all children with mental health disorders;
  - Increase awareness and understanding of the relationship between language and behavior; and
  - Develop interventions to address the effects of these co-occurring conditions.
2. Train school and child care staff to recognize and respond to communication deficits because poor language skills impede social, emotional, and academic development. This should include the utilization of Speech-Language Pathologists as providers.<sup>171</sup>
3. Support implementation of Infant and Early Childhood Mental Health Consultation (IECMHC)—an evidence-based approach that builds the capacity of teachers, providers, and families. IECMHC has been shown to improve children’s social skills and emotional functioning, reduce challenging behaviors, suspensions, and expulsions, improve classroom quality, and reduce teacher stress and turnover.<sup>172 173</sup>
4. Support infant mental health training for pediatricians to help them incorporate infant mental health practice principles during their frequent office visits with infants and toddlers.<sup>174</sup>
5. Because of research showing that quality child care is significantly associated with reduced risk of behavior problems among young children of mothers with maternal depression, continue to invest in *Quality Rated*, Georgia’s three-star rating system that supports child care providers in raising the quality of care they offer and provides families with helpful information in selecting quality child care.
6. Because of research showing significantly higher risk of mental health problems among visually-impaired children, identify students needing further evaluation and/or under professional care provided in Form 3300 to ensure appropriate follow up for vision needs and possible linkages to mental health services.
7. Provide assessments and appropriate interventions for language impairment among children and youth with mental health disorders so that they are able to more fully benefit from talk-based therapies.<sup>175</sup>

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<sup>170</sup> Hollo, A. (2012). Language and Behavior Disorders in School-Age Children: Comorbidity and Communication in the Classroom. *Perspectives on School-Based Issues: American Speech-Language Hearing Association*.

<sup>171</sup> Ibid.

<sup>172</sup> Substance Abuse Mental Health Services Administration. (2017). About Infant and Early Childhood Mental Health Consultation (IECMHC). Retrieved from <https://www.samhsa.gov/iecmhc/about>. Date accessed: 6/24/17.

<sup>173</sup> Perry, D.F.; Dunne, M.C.; McFadden, L., and Campbell, D. (2008). Reducing the Risk for Preschool Expulsion: Mental Health Consultation for Young Children with Challenging Behaviors. *Journal of Child and Family Studies*.

<sup>174</sup> Simpson, T.E., Condon, E., Price, R.M., Finch, B.K., Sadler, L., Ordway, M.R. (2016). Demystifying Infant Mental Health: What the Primary Care Provider Needs to Know. *Journal of Pediatric Health Care*.

<sup>175</sup> Gregory, J., Bryan, K. (2011). Speech and language therapy intervention with a group of persistent and prolific young offenders in a non-custodial setting with previously undiagnosed speech, language and communication difficulties. *International Journal of Language & Communication Disorders*, Mar-Apr.

8. Provide training in Child-Parent Psychotherapy (CPP) for providers who work with children involved in child welfare so that they are better able to mitigate the effects of trauma on social and emotional development. CPP is an evidence-based intervention for children age birth to six that addresses exposure to trauma and strengthens the caregiver-child relationship as a vehicle for restoring and protecting the child’s mental health.<sup>176</sup>
9. Support the sustainability of Youth Mental Health First Aid training and expand the approach to support needs of early childhood and elementary school-age children. This helps school staff and other adults understand mental health issues in children. Research shows that those trained have improved knowledge about mental health problems and are more likely to help a young person in emotional distress or crisis.<sup>177,178</sup>
10. Support the continuation and growth of the Georgia Apex Project (Community mental health providers working to provide mental health services to students in schools) into more schools and expand to include child care centers.

## Birth Outcomes

1. Expand use of group prenatal care (*Centering Pregnancy*) which provides an integrated approach to prenatal care in a group setting, incorporating peer support, and education which has been shown to significantly decrease the likelihood of preterm birth at no additional cost to parents.<sup>179</sup>
2. Provide *Kangaroo Mother Care* for preterm and low birth weight infants, which has been shown to have significant, long-lasting social and behavioral protective effects 20 years after the intervention, including reduced school absenteeism, reduced hyperactivity, and reduced aggressiveness in young adults.<sup>180</sup>
3. Provide opportunities for parents of infants admitted to a neonatal intensive care unit (NICU) to share reading experiences with their baby. Research demonstrates that parents of infants admitted to NICU describe shared reading with their babies as a positive experience with an increased sense of control, normalcy, a source of comfort, and a practice that has helped them cope in difficult moments. Participating in a NICU shared reading program also significantly predicted the likelihood of continued shared reading habits later in childhood.<sup>181</sup>

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<sup>176</sup> Toth, S.L., Gravener, J. (2012). Review: Bridging research and practice: relational interventions for maltreated children. *Child and Adolescent Mental Health*, September.

<sup>177</sup> Kelly, C.M. Mithen, J.M., Fischer, J.A., Kitchener, B.A., Jorm, A.F., Lowe, A., Scanlan, A. (2011). Youth Mental Health First Aid: A Description of the Program and an Initial Evaluation. *International Journal of Mental Health Systems*.

<sup>178</sup> Aakre, J.M., Lucksted A., Browning-McNee, L.A. (2016). Evaluation of Youth Mental Health First Aid USA: A program to assist young people in psychological distress. *Psychological Services*.

<sup>179</sup> Ickovics, J.R., Kershaw, T.S., Westdahl, C., Magriples, U., Massey, Z., Reynolds, H., Rising, S.S. (2007). Group Prenatal Care and Perinatal Outcomes: A Randomized Controlled Trial. *Obstetrics & Gynecology*, August.

<sup>180</sup> Charpak, N., Tessier, R., Ruiz, J.G., Hernandez, J.T., Uriza, F., Villegas, J., Nadeau, L., Mercier, C., Maheu, F., Marin, J., Cortes, D., Gallego, J.M., Maldonado, D. (2017). Twenty-year Follow-up of Kangaroo Mother Care Versus Traditional Care. *Pediatrics*, January.

<sup>181</sup> Lariviere, J., Rennick, J.E. (2011). Parent Picture-Book Reading to Infants in the Neonatal Intensive Care Unit as an Intervention Supporting Parent-Infant Interaction and Later Book Reading. *Journal of Developmental and Behavioral Pediatrics*, January.

4. Develop and support efforts that increase the number of infants and toddlers who receive Language Nutrition, defined as the use of language that is sufficiently rich in engagement, quality, quantity and context that it nourishes the child socially, neurologically, and linguistically.<sup>182</sup>
5. Provide Language Nutrition coaching for parents of premature babies in the NICU; research indicates that preterm infants exposed to more adult talk have significantly better language and cognitive skills by 18 months of age. In a study of very preterm babies—ranging from 23-30 weeks—recordings of adult talk in the NICU found that:<sup>183</sup>
  - a. at 32 weeks, adult word count per hour (the number of words directed to infants) alone accounted for 12 percent of the variance in language composite scores and 20 percent of the variance in children’s expressive communication scores at 18 months of age.
  - b. at 36-weeks, adult word count per hour independently accounted for 26 percent of the variance in cognitive composite scores of children at 7 months of age.

### Early Childhood Education

1. Continue to invest in and expand quality early learning programs because research—including research specific to Georgia’s universal Pre-K program—shows that higher-quality early learning programs have greater impacts on children’s development and are more likely to experience gains that are sustained after the child leaves preschool.<sup>184, 185</sup>
2. Continue to invest in *Quality Rated*, Georgia’s three-star rating system that supports child care providers in raising the quality of care they offer and provides families with helpful information in selecting quality childcare.<sup>186</sup>

### Summer Learning Loss and Out-of-School-Time Learning

1. Because research shows that access to self-selected books for summer reading significantly improves outcomes in reading test scores, support programs that address summer learning loss such as *Books for Keeps Stop Summer Slide!* that gives elementary school students access to 12 free books of their choice just before the summer months.<sup>187</sup>
2. Increase awareness about the importance of summer learning to encourage families and community leaders to take advantage of existing programs and services; and to support families in reading to and with children over the summer months.<sup>188</sup>

<sup>182</sup> Weldon, A., (2014). Language Nutrition: Filling the Word Opportunity Gap. Speech presented at National meeting of state leads for the National Campaign for Grade-Level Reading, Washington, DC. January 9.

<sup>183</sup> Caskey, M., Stephens, B., Tucker, R., Vohr, B. (2014). Adult Talk in the NICU With Preterm Infants and Developmental Outcomes. *Pediatrics*, March.

<sup>184</sup> Yoshikawa, H., Weiland, C., et al. (2013). Investing In Our Future: The Evidence Base For Preschool Education. *Society for Research in Child Development and the Foundation for Child Development*.

<sup>185</sup> Peisner-Feinberg, E. S., Garwood, J. D., & Mokra, I. L. (2016). Children’s Outcomes and Classroom Quality from Pre-K through Kindergarten: Findings from Year 2 of Georgia’s Pre-K Longitudinal Study. Executive Summary. Chapel Hill, NC: The University of North Carolina, FPG Child Development Institute.

<sup>186</sup> Ogbu, N. (2014). An Introduction to Quality Rated: Georgia’s Tiered Quality Rating and Improvement System for Child Care Providers. Governor’s Office of Student Achievement. See also <https://qualityrated.decal.ga.gov/>

<sup>187</sup> Allington, R.L., McGill-Franzen, A., Camilli, G., Williams, L., Graff, J., Zeig, J., Zmach, C., Nowak, R. (2010). Addressing Summer Reading Setback Among Economically Disadvantaged Elementary Students. *Reading Psychology*.

<sup>188</sup> Improving Summer Learning: Key Strategies for Success. The Campaign for Grade-Level Reading. Retrieved from <http://glrhuddle.org/summer/strategies>. Date accessed: 1/17/17.

3. Expand access to summer meals through partnerships such as the summer lunch at the library effort designed to provide free summer meals at local libraries to support children's access to learning opportunities and nutrition during the summer months.

### **Adult Literacy**

1. Support family literacy programs which have been shown to positively impact children's literacy outcomes.
2. Support adult literacy programs for young mother's without a high school diploma as an approach to improving their child's language and literacy development.
3. Explore the potential of mobile learning applications and other technological solutions to improve the reading skills of low literate adults.<sup>189</sup>

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<sup>189</sup> Barbara Bush Foundation Adult Literacy XPRIZE presented by Dollar General Literacy Foundation. Retrieved from <http://barbarabush.org/xprize/>. Date accessed: 1/17/17.

## V. Appendix

### Campaign Cabinet

The Get Georgia Reading Campaign was developed and operates under the auspices and guiding vision of the following group of high-level statewide public/private organization leaders.

In addition to guiding the direction of the Campaign, Cabinet members:

- Leverage their statewide reach and positions of leadership to promote the application of the four-pillar common agenda at the systems level; and
- Serve as ambassadors inside their sectors and network, sharing information about the Campaign and promoting use of the four pillars as a framework for action.

#### **Annie E. Casey Foundation—Atlanta Civic Site**

Ruby Sullivan  
Senior Associate for Education Achievement

#### **First Lady of Georgia**

Sandra Deal

#### **Georgia Alliance of Education Agency Heads**

Jennifer Rippner, Coordinator

#### **Georgia Department of Community Health**

Heather Bond, Medicaid Deputy Chief

#### **Georgia Department of Early Care and Learning**

Amy Jacobs, Commissioner  
Kristin Bernhard, Deputy Commissioner  
Susan Adams, Assistant Commissioner

#### **Georgia Department of Education**

Richard Woods, State Superintendent  
Caitlin Dooley, Deputy Superintendent  
Garry McGiboney, Deputy Superintendent

#### **Georgia Department of Public Health**

Brenda Fitzgerald, Commissioner

#### **Georgia Division of Family and Children Services**

Bobby Cagle, Director

#### **Georgia Early Education Alliance for Ready Students**

Mindy Binderman, Executive Director

#### **Georgia Family Connection Partnership**

Gaye Smith, Executive Director

#### **Georgia Family Connection - Collaborative Network**

Rhonda Heuer, Director, Polk County Family Connection  
Janet Adams, Director, Atlanta/Fulton Family Connection

#### **Georgia Partnership for Excellence in Education**

Dana Rickman, Director of Policy and Research

#### **Georgia Professional Standards Commission**

Bobbi Ford, Education Specialist

#### **Georgia Public Library Service**

Julie Walker, State Librarian

#### **Georgia School Superintendents Association**

*Baldwin County School District*  
Noris Price, Superintendent  
*Marietta City School District*  
Grant Rivera, Superintendent

#### **Get Georgia Reading Campaign**

Arianne Weldon, Campaign Director

#### **Governor's Office of Student Achievement**

Martha Ann Todd, Executive Director

#### **Marcus Autism Center, Children's Healthcare of Atlanta**

Lindee Morgan, Co-Director, Educational Science Research Core

#### **Office of Governor Nathan Deal**

Merry Hunter Hipp, Education Policy Advisor

#### **Rollins Center for Language and Literacy – Atlanta Speech School**

Comer Yates, Executive Director

#### **Technical College System of Georgia**

Gretchen Corbin, Commissioner  
Benita Moore, Curriculum Program Specialist

#### **University System of Georgia**

Bob Michael, Associate Vice Chancellor of Educator Preparation and Policy

#### **Voices for Georgia's Children**

Erica Fener-Sitkoff, Executive Director