## Tipping the Scales

How integrating school and community resources can improve student outcomes and the Commonwealth's future



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### **Table of Contents**

Inti	roduction
	Why integrated student support
	Why now
	More children, in more Massachusetts communities, are experiencing intense barriers to learning
	Research has identified how these barriers can be overcome
	Economists find well-implemented integrated student support can produce a return on investment to society of \$3 in benefits for every \$1 in costs.
	Models in schools and communities across the country offer opportunities to study implementation
	Massachusetts has the foundation in policy and practice to make comprehensive, integrated student support available in any community that chooses it
	An infrastructure can make implementation at scale feasible and cost-efficient
I.	More children, in more Massachusetts communities, experience intense barriers to learning
	Changing demographics
	Changing intensity and distribution of poverty and high-needs students
	Growing social-emotional, health, and mental health needs
	Incremental or no academic progress for high-needs students
II.	Research has identified how these barriers can be overcome
	Understanding why integrated support may produce positive impacts on student learning
	What we learn from science about principles of effective practice for integrated support.
	Evidence of impact on student learning outcomes
III.	Economists find well-implemented integrated student support can produce a return on investment to society of \$3 in benefits for every \$1 in costs 19
	Evidence of return on investment
IV.	Models in schools and communities across the country offer opportunities to study implementation
	What's happening in Massachusetts
	Identifying services and supports
	Finding gaps in availability of certain services
	Managing and aligning partnerships
	Learning from integrated student support approaches
V.	Massachusetts has the foundation in policy and practice to make comprehensive, integrated student support available in any community that chooses it
VI.	An infrastructure for integrated student support can make implementation at scale
	feasible and cost-efficient
Con	iclusion

### Introduction

From creating the first public school in the nation, to developing standards-based reforms, Massachusetts is a leader in American education. Its educators have launched Massachusetts students to top the nation on academic tests like the National Assessment for Educational Progress (NAEP), Program for International Student Assessment (PISA), and Trends in International Mathematics and Science Study (TIMSS).<sup>2</sup> Results on the Massachusetts Comprehensive Assessment System (MCAS) indicate that performance gaps between groups of students are narrowing incrementally.<sup>3</sup> Graduation rates have been ticking up year after year.<sup>4</sup>

These successes, hard-earned and important, provide a foundation to help us meet the challenges of our rapidly changing and increasingly demanding world. To succeed economically and civically in the 21st century, Massachusetts will need to cultivate a pool of talent that is deeper, broader, and more diverse than ever before.

Yet the opportunity to grow our next generation of talent is not evenly shared across the Commonwealth.<sup>5</sup> In 2017, Massachusetts ranks 45th out of 50 states in income inequality and 31st in educational equality by race.<sup>6</sup> In the most recent year for which the performance of low-income students was compared to the state average performance on MCAS, 68 percent of low-income students did not attain basic proficiency on mathematics.<sup>7</sup> Thirty seven percent of low-income students did not attain basic proficiency in English.<sup>8</sup> In 2015, 64 percent of African-American and 61 percent of Latino students did not have proficiency in mathematics, while 44 percent and 49 percent, respectively, did not demonstrate proficiency in English.<sup>9</sup>

Massachusetts cannot afford to lose the talents and potential of these large and growing numbers of our children. To prosper, it will need citizens and workers who can solve problems, understand technology, think creatively, analyze and synthesize information, and communicate effectively.

To meet the challenges of the 21st century, developing everyone's full capabilities and potential to contribute to our prosperity requires that we find reliable, research-based, cost-effective ways to overcome the barriers to learning that come from growing up in challenging circumstances.

### ABSTRACT

This white paper looks at the trends making integrated student support—"a school-based approach to promoting students' academic success by developing or securing and coordinating supports that target academic and non-academic barriers to achievement," 1—increasingly urgent. It outlines what we are learning from science and how Massachusetts schools and districts could access and coordinate existing resources to more fully and effectively help today's students learn and thrive. We make the case that by establishing an infrastructure to facilitate integration of education with social services, youth development, health and mental health resources for children, Massachusetts has potential to narrow persistent achievement gaps, further reduce dropout rates, and re-set the course of our state's economic and civic future, cultivating talent and potential in every community across the Commonwealth

Today, more than at any other time in history, we have the knowledge and capability to unleash our students' talents and potential, regardless of zip code. By integrating education with social services, youth development, health and mental health resources for children and families, we can improve student outcomes and our shared prosperity.

### Why integrated student support

All students need supports and opportunities to reach their potential. Many receive them as a regular part of growing up, and many do not. Since the 1960s, it has been understood that socioeconomic background is a significant factor impacting academic achievement.<sup>10</sup> More recent research confirms that contexts beyond the school are critical, accounting for up to two-thirds of the variance in student achievement.<sup>11</sup>

Why do outside factors play such a big role in a student's academic learning and future success? Insights from science help us to understand why more deeply, and what can be done about it.

Over the last few decades, the sciences have taught us a great deal about what all students need to be successful in school and beyond. Neuroscientists have literally opened a window into the human brain and can show with dramatic images the differences in brain structure between those who develop with the supports and basic resources that all children need, and those who do not.<sup>12</sup> Researchers in psychology and cognitive science have deepened

our understanding of critical contexts and mechanisms for development.<sup>13</sup> Research has probed how differences in supports and basic resources can help or harm development and learning.<sup>14</sup> Neuroscientists show us that we can improve critical skills throughout our lifetimes, but especially during the first 12 years of life, because our brains can change to create new pathways to function well.<sup>15</sup> And developmental psychologists illuminate the potential of "whole child" approaches that support all domains of development—cognitive, social emotional, physical, language—to have a positive impact on students' development and learning.

Together, these sciences provide a road map to help us tip the scales in favor of a student's healthy development and learning. They help us to see that all young people rely on systems of support to develop and learn well.

Effective approaches to integrated student support build upon this under-

effective integrated student support drives the right set of schooland community-based resources to the right child at the right time, over time

standing. By looking at the supports and opportunities each student might need to be ready to learn and engage in school, and by working closely with the teachers, families, and school personnel who know the child best, integrated student support drives the right set of school- and community-based resources to the right child at the right time, over time.

New evidence demonstrates that, when well-implemented, integrated support helps students engage in school, improve their attendance, earn better grades and scores on statewide proficiency tests, reduce dropout rates, and contribute to our Commonwealth. A study of one model shows that the societal return on investment is \$3 for every \$1 invested. In short, comprehensive support benefits students, and all of us.

### Why now

Strategies for leveraging community-based public and private resources to support students' comprehensive needs are not new. Since the late 19th century, innovators developed numerous approaches to integrating supports for children in schools and communities.<sup>16</sup> To the extent budgets permit, it is common today for schools to serve meals and hire nurses, social workers, adjustment counselors, guidance counselors, physical education instructors, arts teachers, and others as part of providing a well-rounded education and supporting healthy child development. Principals and superintendents regularly identify outside organizations or "partners" to offer a range of opportunities or services to students. What is different now?

### More children, in more Massachusetts communities, are experiencing intense barriers to learning

The student population in Massachusetts has changed dramatically, even over the last ten to fifteen years. As we will see in Part I, the Commonwealth is home to a higher proportion of students experiencing circumstances including poverty, and health and mental health challenges, known to interfere with their readiness to develop the cognitive and social-emotional skills demanded in school and in the workplace. Some of these students are living in communities of more concentrated poverty than ever before, while others are moving into communities with little experience serving children and families in greatest need. these sciences provide a road map to help us tip the scales in favor of a student's healthy development and learning

### Research has identified how these barriers can be overcome

Drawing on the interdisciplinary developmental and neurobiological sciences, researchers and practitioners have tested and refined approaches to addressing the comprehensive needs of all students so they are ready to learn and engage in school. In Part II, we describe principles of effective practice and the evidence showing that when students receive comprehensive supports and opportunities that are integrated alongside academic instruction, they can thrive academically, closing achievement gaps and reducing dropout rates, regardless of socio-economic status.<sup>17</sup>

### Economists find well-implemented integrated student support can produce a return on investment to society of \$3 in benefits for every \$1 in costs

Economists at Columbia University quantified the benefits of effective integrated student support to students and to society, and then compared them to the costs of comprehensive services that both address students' needs and expand their opportunities. Part III describes the research that compares the benefits to the costs of integrated student support and the costs of social services, after school and mentoring programs, health and mental health services, and more, finding a positive return on investment.<sup>18</sup>

### Models in schools and communities across the country offer opportunities to study implementation

Educators and non-profits across Massachusetts and across the nation have been experimenting with various approaches to integrating comprehensive supports and opportunities for students in order to enhance their readiness to learn. These efforts, including City Connects, which is incubated in the Mary E. Walsh Center for Thriving Children at the Boston College Lynch School of Education, and demonstrates significant impact on student learning outcomes, give us a living laboratory from which to draw the best ideas, and to offer guidance for effective implementation in a wide range of communities. In Part IV, we describe some of what can be learned from programs and communities across the country and here at home.

### Massachusetts has the foundation in policy and practice to make comprehensive, integrated student support available in any community that chooses it

Years of policy developments and initiatives have laid a foundation for comprehensive, integrated student support. In Part V we look at the context leading up to the Massachusetts Board and Department of Elementary and Secondary Education's decision to expand the agency's priorities to "support social-emotional learning, health, and safety" of students.<sup>19</sup> Taken together, these developments provide an opportunity to revisit current approaches to student support, and detail an understanding and readiness to make more comprehensive and effective support for children feasible and cost-efficient for the Commonwealth and its schools.

### An infrastructure can make implementation at scale feasible and cost-efficient

Existing systems and practices in use in a few communities today give us a starting point from which to develop and refine an infrastructure that can make it possible for any community that chooses to provide integrated student support to do so. As leaders of Massachusetts' 26 lowest income Gateway Cities noted, there is a need for "a backbone infrastructure" to facilitate coordination of school- and community-based resources.<sup>20</sup> In Part VI, we outline the possibilities presented by today's low-cost technologies and the related supports that may be needed to enable widespread implementation.

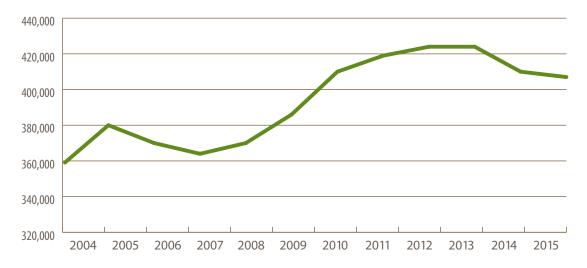
At this unique moment in time, we have the knowledge, tools, and experience to make it possible to cure the disconnect between children in need and resources we have by establishing an infrastructure to facilitate the integration of education with social services, youth development, health and mental health resources for children and families. Across the public and private sectors in Massachusetts, there are insights and information to help us redesign delivery systems so that we are not only adding programs and initiatives, but building necessary and efficient tools to help drive the right set of existing resources to the right child at the right time. By synthesizing robust new information about child development, evidence regarding effective practices, and the capacity of technology to make the work of comprehensive integrated student support low cost and possible at scale, Massachusetts can fulfill its commitment to children and families and meet the challenges and opportunities of the 21st century.

# I. More children, in more Massachusetts communities, experience intense barriers to learning

### **Changing demographics**

Massachusetts has about 1.4 million children under the age of 18, and about 900,000 are age 11 or younger.<sup>21</sup> Over the last decade, the Commonwealth's most rapidly growing demographic groups include children who face well-known barriers to academic progress and proficiency: children living in low-resourced families, learning English, or experiencing homelessness.

Between 2004 and 2014, Massachusetts became home to an additional 51,000 children living below 200 percent of the federal poverty level, defined as earning less than \$48,016 for a family of four (Table 1).<sup>22</sup> A population of 359,000 low-income children in 2004 increased to over 410,000 in 2014, the most recent year for which population estimates are available.<sup>23</sup> Schools have seen a concomitant increase in the proportion of students eligible for Free or Reduced Lunch (FRL), a common measure of low income status, which rose from about 30 percent to 44 percent over the same period.<sup>24</sup>



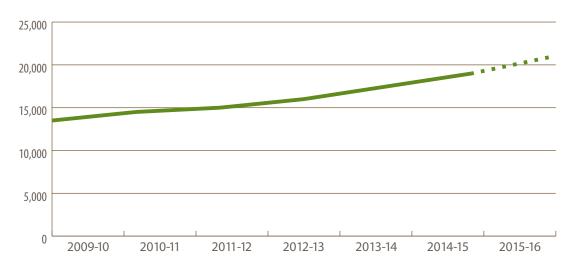


At the same time, the child population in Massachusetts is becoming more ethnically and linguistically diverse. The last decade saw a decline in the overall proportion of white children, a steady proportion of African-American children, and an increase in the proportion of Latino children. Latino children grew from about 12 to 17 percent of the population, or by about 55,000 children.<sup>25</sup> The total number of children in immigrant families, defined as the child having been born outside of the United States or living with at least one parent who is foreign-born, has also increased significantly over the last decade. In 2004, there were 309,000 children in immigrant families or 21 percent of all Massachusetts children. By 2014 that number rose to 385,000 or 28 percent of all children.<sup>26</sup>

Schools have seen a parallel increase in the number of students who speak a language other than English at home. In 2014, Massachusetts schools educated 31,000 more students speaking a language other than English at home than they had a decade ago.<sup>27</sup>

Overlapping with the rise in Massachusetts' low-income population is the increase in children living with one parent or experiencing homelessness. Children raised in single parent households are more likely than their peers in two-parent families to dropout of school and typically do not have access to the economic or human resources available to those being raised in two-parent households.<sup>28</sup> Since 2004, the number of children liv-ing with a single parent has increased by about 25,000, going from 400,000 to 425,000 over the last decade.<sup>29</sup>

Single-parent families are a high proportion of the families experiencing homelessness in Massachusetts. Homelessness is associated with poor school engagement and other risk factors, such as mobility from school to school, and other related factors that can impede student success, such as health issues, social isolation and rejection, and food insecurity.<sup>30</sup> Between 2009 and 2015, the number of homeless students in Massachusetts increased 49 percent (Table 2).<sup>31</sup> The number of districts reporting homeless students also rose from 303 in 2009 to 388 in 2014, indicating that homelessness is spreading to some schools and communities for the first time.<sup>32</sup> Data on the location of students growing up in low-resource environments affirms this trend.



#### TABLE 2. Number of homeless students in Massachusetts

### Changing intensity and distribution of poverty and high-needs students

A recent survey of school district leaders in Massachusetts' 26 low-income Gateway Cities found that "district leaders repeatedly voiced concern over the growing prevalence of poverty, violence, substance abuse, mental illness, hunger, and housing instability and homelessness as chief among the issues their students encounter each and every day."<sup>33</sup>

These challenges are growing more deeply concentrated in communities like the Gateway Cities, and are more and more prevalent in cities and towns across the state. The number of Massachusetts children living in communities with deeply concentrated poverty, where 30 percent or more households earn below the federal poverty threshold of \$24,008 for a family of four, is on the rise. Between 2000 and 2014, the number of Massachusetts children living in intensely poor neighborhoods grew by 39,000 and is now estimated to be a total of 117,000. Growing up in concentrated poverty places children at higher risk of poor school attendance, high mobility, social-emotional dysfunction, lack of readiness for school, and limited cultural capital.<sup>34</sup>

At the same time that some communities are experiencing more concentrated poverty, others are experiencing noticeable increases in their low-income populations for the first time. In Massachusetts, and around the nation, children and families in poverty are rapidly moving out of major urban areas and poor rural communities into smaller cities, suburban areas and small towns, communities that may not have traditionally been called upon to recognize or address the impacts of poverty.<sup>35</sup> For example, over a five-year time period, double digit increases in students living in low-income households occurred in small cities like Holyoke, Fitchburg, and Everett (Table 3).<sup>36</sup>

Select districts b	y population density	Low-income student %		
District	Population density	2009-10 %	2013-14 %	% Difference
South Hadley	17,723	26%	32%	6%
Burlington	24,875	8%	13%	5%
Wellesley	28,504	4%	5%	1%
Holyoke	40,029	74%	85%	11%
Fitchburg	40,358	66%	77%	11%
Everett	42,092	69%	80%	11%
Revere	52,534	71%	78%	7%
Framingham	69,288	33%	40%	7%
Lawrence	76,820	87%	92%	5%
Newton	86,241	10%	11%	1%
Springfield	153,428	81%	87%	6%
Worcester	181,901	72%	73%	1%
Boston	629,182	76%	78%	2%

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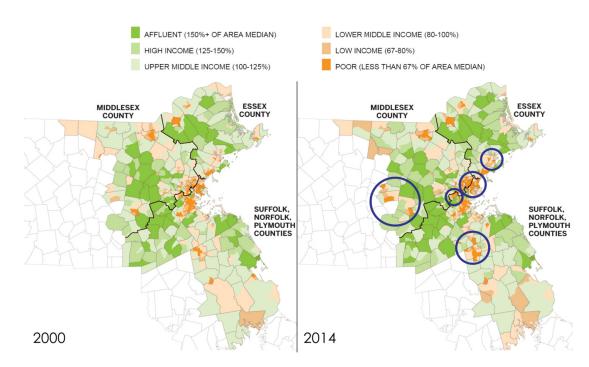
At the same time, Framingham's population of low-income students increased by over 20 percent, moving from 33 to 40 percent, and South Hadley's population of low-income students changed by over 30 percent, going from 26 to 32 percent.<sup>37</sup> A recent analysis of metro Boston by the Metropolitan Area Planning Council found that, "Wealthy communities such as Sudbury, Winchester, Hopkinton, Hingham, and Littleton have at least twice as many needy students in their schools as they did 10 years ago... Other moneyed areas with significant increases in their population of needy students include Wellesley, Duxbury, Lexington, Needham, Belmont, and Westwood."<sup>38</sup>

The implications of this widening distribution of poverty are manifold.

- Suburbs and smaller cities, especially distressed communities with affordable housing options, have a limited tax base, even as demand for social services increases.<sup>39</sup>
- They also have less philanthropic support as regional and national foundations concentrate in larger cities.<sup>40</sup>

- Relative to major urban centers, smaller cities, suburban and outlying communities are less likely to have easy access to social service agencies, early education centers, medical care, jobs and job training, or transportation.<sup>41</sup>
- Social services agencies working in suburbs are stretched over wider geographic areas.
- Poor residents often lack a car and have limited access to public transportation, making it even more challenging to connect children and families in need to available resources.<sup>42</sup>

The simultaneous trends of deepening *and* distributing poverty can be seen in the study by Kendra Bischoff of Cornell University and Sean Reardon of Stanford University summarized in *The Boston Globe*, which explored the changing distribution of income in Eastern Massachusetts (Figure 1).<sup>43</sup>



#### FIGURE 1. Income distribution in eastern Massachusetts 2000-14

SOURCE: Kendra Bischoff, Cornell University, and Sean F. Reardon, Stanford University, using decennial US Census data from 1970, 1980, 1990, and 2000 and American Community Survey five-year estimates for 2005-09 and 2010-14. David Butler, Patrick Garvin/Globe Staff. As seen in the March 6, 2016 Boston Globe article, *Boston's struggle with income segregation*. Image modified to highlight changes.

Other high-needs populations are also becoming more widely distributed. Massachusetts suburbs and small cities are also seeing large increases in their populations of students learning English as a second language (ELL), for example.<sup>44</sup> Though very high concentrations of English language learners remain in cities, from 2006 to 2010, for example, five Greater Lowell school districts—Acton-Boxboro, Ayer, Chelmsford, Groton-Dunstable and Wilmington—experienced a rise in ELL enrollments by 50 percent to 2000 percent.<sup>45</sup>

### Growing social-emotional, health, and mental health needs

Moreover, there are strong correlations between these types of demographic shifts and rising physical and mental health needs among children that are known to inhibit school attendance and learning. For example, children in lower income households are more likely to have an uncorrected visual impairment, untreated dental caries, poorly managed asthma, or be diagnosed with a learning disability or attention deficit and hyperactivity disorder (ADHD).<sup>46</sup>

They are also more frequently contending with "adverse childhood experiences" (ACEs), which are potentially traumatic experiences that can interfere with children's healthy development and readiness to learn. "Recent neurobiological, epigenetics, and psychological studies have shown traumatic experiences in childhood can diminish concentration, memory, and the organizational and language abilities children need to succeed in school," explains the Trauma and Learning Policy Initiative at Massachusetts Advocates for Children.<sup>47</sup>

#### **STRESSORS**

A Malden elementary school nurse's office recorded a list of stressors students experienced within a one-week span in early Spring, 2016.<sup>48</sup>

HungerSeLack of clothingDCPovertyPTHomelessnessPaDomestic violencePaPhysical abusePa

Sexual abuse DCF custody PTSD Parents deceased Parents MIA Parents in prison

Parents in half way house Parents in another country Moving through foster homes Siblings separated Depression Anxiety Court involvement Alcoholism Drug addiction Police issues Cutting Suicidal thoughts

ACEs include the experiences above such as being abused, growing up in poverty, coping with the incarceration or death of a parent, or witnessing violence in the home or neighborhood. According to the most recent National Survey of Children's Health, 33 percent of children in Massachusetts experience one or two ACEs, while 9 percent experience three or more, putting Massachusetts just below the national average in both categories.<sup>49</sup> ACEs are associated with increased risk of trauma, depression, and myriad health problems later in life.<sup>50</sup>

Broad trends in public health also contribute to growing physical and mental health needs among students. Children who are overweight or obese can experience related complications such as psychosocial problems, cardiovascular risks, and diabetes. Although the percentage of children overweight or obese has declined in recent years, 31 percent of students still meet these thresholds.<sup>51</sup> In addition, the rates in the metro Boston area of asthma leading to hospitalization are ticking up.<sup>52</sup> Simultaneously, more children are experiencing other health-related risks, a high proportion of whom will have mild to severe learning challenges, and may have chronic medical needs that schools need to address to support learning.<sup>53</sup>

In addition, between 13 and 20 percent of children are diagnosed with a mental health disorder, defined as "serious deviations from expected cognitive, social, and emotional development," and rates are increasing.<sup>54</sup> In Massachusetts, for example, 11.1 percent of adolescents had a "major depressive episode" in 2013-14 up from 8.8 percent in 2010-11.<sup>55</sup> Anecdotally, many schools report increases in students' severe uncontrollable behavior. Even at the elementary level, more students are not responding to usual interventions and strategies. Calls to out-of-school support teams and area hospitals are reportedly increasing. One small school district describes calling an ambulance to bring a child to the emergency room two to three times per week.<sup>56</sup>

The increasing proportion of children experiencing a range of health and mental health challenges can be overwhelming to schools with limited resources to connect students to appropriate supports, and has significant implications for children's readiness to learn. "Evidence from diverse fields ranging from molecular biology to child development and epidemiology demonstrate that specific health problems influence motivation and ability to learn, and have powerful effects on academic performance and upward social mobility," explain researchers at the Education Commission of the States.<sup>57</sup> "If a child needs but doesn't have eyeglasses, can't sleep because of poorly controlled asthma, feels unsafe at school, is hungry or cannot focus attention, motivation and ability to learn are greatly limited. In communities with high rates of poverty, these conditions are endemic."<sup>58</sup> All told, the Massachusetts Department of Elementary and Secondary Education estimates that 45 percent of all students today are "high needs."<sup>59</sup>

### Incremental or no academic progress

Though out-of-school factors explain two-thirds of the differences in student achievement, schools are uniquely accountable for driving student achievement, closing achievement gaps, and reducing dropout rates despite the rapidly shifting demographic contexts in which they are operating.<sup>60</sup> As the proportion of Massachusetts children experiencing known barriers to learning has grown, Massachusetts schools are, on average, educating only a fraction to attain the skills they will need to participate in 21st century economic and civic life, and leaving a reservoir of talent untapped. "Critically, the students who are not experiencing these Massachusetts Department of Elementary and Secondary Education estimates that 45 percent of all students today are "high needs".

[Massachusetts' educational] opportunities are disproportionately our historically underserved, or high needs, student groups: students who are English language learners, receiving special education services, economically disadvantaged, and/or members of racial or ethnic minority groups," writes the Department of Elementary and Secondary Education.<sup>61</sup>

As noted above, MCAS results for 8th graders show that 68 percent of low-income students did not attain proficiency on mathematics.<sup>62</sup> Thirty seven percent of low-income students did not attain basic proficiency in English.<sup>63</sup> These results reflect only minute progress in narrowing the achievement gap between low-income students and performance at the state average. In the eight years encompassing 2007-2014, the proficiency gap between low-income students and the state average narrowed by 5 percent on English and 3 percent on math.<sup>64</sup>

For comparison, performance of Massachusetts 8th graders on the NAEP shows gaps between those eligible for free or reduced price lunch, a measure of low-income, and the state average. The most recent data available show that Massachusetts' 8th grade students eligible for free and reduced lunch scored an average of 25 points lower than their non-eligible peers in reading and 32 points lower in mathematics. According to the National Center for Education Statistics, these gaps are unchanged between 1998 and 2015 on reading, or between 1996 and 2013 in mathematics.<sup>65</sup> In short, progress for low-income students is incremental at best. Similarly, in 2015, 64 percent of African-American and 61 percent of Latino students did not show proficiency in mathematics, while 44 percent and 49 percent, respectively, did not demonstrate proficiency in English.<sup>66</sup> Over the last nine years, from 2007-2015, achievement gaps between 8th grade African-American students and their white peers narrowed by 8 percent on English and 4 percent on mathematics. Latino students also made progress relative to white students, closing achievement gaps by 10 percent on English and 8 percent on mathematics.<sup>67</sup>

However, here too, the NAEP reports stagnation. According to the National Center for Education Statistics, between the 1990s and today, Massachusetts' African-American and Latino 8th graders made no significant progress in closing performance gaps when compared to white 8th grade students.<sup>68</sup> About 15 percent of all high school dropouts are African-American while 38 percent are Latino. "The state's educators and leaders acknowledge...there has been less success in narrowing racial and socio-economic achievement gaps," write Sir Michael Barber and Simon Day in a report for the Massachusetts Business Alliance for Education.<sup>69</sup>

Moreover, while the high school dropout rate has been declining in Massachusetts, going from 3.8 percent in 2004 to 1.9 percent in 2015, close to two-thirds of those who exit school prematurely are low-income students.<sup>70</sup>

Concerned about Massachusetts' long-term global standing and closing the "opportunity gap" for students, the Massachusetts Business Alliance for Education recommends "the introduction of progress for low-income students is incremental at best

Personal Opportunity Plans that set out how students who fall behind will catch up [...] and to develop stronger school and community partnerships...<sup>71</sup> Research supports this idea, showing that when comprehensive supports are put in place, students can thrive academically, closing achievement gaps and reducing dropout rates, regardless of socio-economic status.<sup>72</sup>

### II. Research has identified how these barriers can be overcome

Why would a child do better academically when his or her non-academic needs are met? This remains an open empirical question. However, the neurobiological and developmental sciences provide a strong theoretical underpinning that begins to map the pathways between student support, child development, and learning. Key insights from the interdisciplinary developmental sciences—spanning human development, cognitive science, psychology, and neurology—help to illuminate how and why these impacts may occur. When coupled with mounting evidence that well-implemented integrated student support produces positive impacts on students' academic learning and thriving, science gives us a clear idea of what is possible for every child when he or she gets a personalized set of opportunities and supports.

### Understanding why integrated support may produce positive impacts on student learning

The developmental sciences provide insights that help us to better understand the role and potential of integrated student support, a school-based approach to advancing student achievement by "developing or securing and coordinating supports that target academic and non-academic barriers to achievement."<sup>73</sup> These insights include that:

- Every child is unique. As a function of differing genetic and environmental circumstances, no two children experience the same developmental trajectory.<sup>74</sup>
- Development occurs across domains. Child development takes place across multiple domains—including academic, social-emotional, health, and family, with each domain impacting all other domains.<sup>75</sup>
- Strengths and risks co-act. There is a delicate dialogue between risks and strengths, where a child's protective resources such as positive relationships, talents or interests may or may not help to mitigate the impacts of risk factors like deprivation, abuse, or anxiety. The presence of risk factors does not necessarily lead to a negative outcome because of the co-action of a child's protective factors.<sup>76</sup>
- Intensity matters. Children experience difficulties and strengths along a continuum of intensity, requiring varying levels of support.<sup>77</sup>

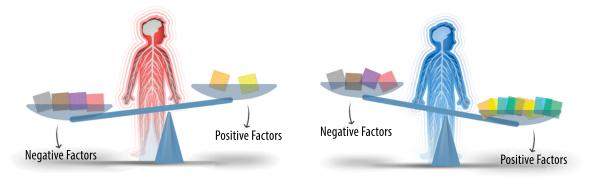
#### AN EXAMPLE

Maya is a 3rd grader in an urban public school. An assessment of her strengths and needs shows that she comes to school hungry, complains of headaches, may need eye glasses, has behavioral challenges, has an incarcerated parent, and struggles to learn math. She also has good friends, enjoys drawing and singing, reads at grade level, and is able to articulate her emotions. Following consultation with the adults who know her best, a customized plan could include connecting her family to additional food resources, ensuring her vision is checked and eye glasses procured, giving her eight weeks of support from the school's roving math tutor, trying some positive discipline strategies in class, signing up for a mentoring program, and sending her to an afterschool program that provides homework support, art programs, and dinner in a location near Maya's home, which allows for a pick up that works for her family's schedule. Over time, Maya's math skills improve and she is more engaged in class, her self-confidence and peer-relationships are enhanced by her experience in the afterschool program, her behavior improves, and she has more energy and fewer headaches because she's eating more regularly. Next year, a new plan will be tailored to her needs at that time.

- Development occurs in different contexts. Children develop in multiple contexts, including their home, school, and community. All contexts play an important role in their development.<sup>78</sup>
- Development occurs over time. Positive and negative childhood experiences affect a student's success and adjustment during the elementary school years, which, in turn, affect behavior and learning during middle school, high school, and beyond.<sup>79</sup>
- Development can be changed. Exposure to chronic adversity and trauma can lead to toxic stress, which can adversely impact children's brain development and diminish academic outcomes. In spite of these challenges, developmental science also recognizes the phenomenon of brain plasticity and the malleability of development, which makes it possible to intervene in the course of development.<sup>80</sup>

Researchers theorize that comprehensive resources and opportunities tailored to the developmental needs of each child enhance the brain's protective factors and reduce risk factors—leading to improved readiness to learn and thrive.<sup>81</sup>

#### FIGURE 2. Tipping the scale for each student



SOURCE: Center on the Developing Child at Harvard University, modified

Picture a scale for each child (Figure 2).<sup>82</sup> On one side of the scale are risk factors of differing weights that may interfere with a child's healthy development and learning, on the other side are protective factors that support healthy development and learning. Fields of developmental science and neurobiology suggest that the scale can be tipped in a positive direction if protective factors are bolstered and risk factors reduced, altering brain development, and developmental trajectories.

This means that a student's adverse experiences need not result in poor school performance and reduced life chances.<sup>83</sup> Mounting research provides a guide to "tipping the scales" with integrated supports.

### What we learn from science about principles of effective practice for integrated support

The developmental sciences illuminate risks to healthy child development and learning, as well as characteristics of meaningful intervention. The literature on development makes clear that: (I) protective factors can be bolstered while risk factors can be addressed, essentially making it possible to tilt a child's negative developmental trajectory in a positive direction; and (2) child development is influenced across contexts that include home, school, and community.

So what does this imply for practice? Decades of scholarship from diverse fields emphasize the importance of systemic, comprehensive approaches to student support aimed at meeting the needs of the "whole child."<sup>84</sup> Across the nation, approaches to "wraparound," "comprehensive services," "full service schools," "community schools," "Promise Neighborhoods," or "collective impact," are pursuing this aim.

More recent scholarship asserts that because of the dynamic influences on child development and readiness to learn, effective approaches to intervention must tailor to the heterogeneity of variations—or differences—across children and across time.<sup>85</sup> In short, the research suggests that to be a maximally effective intervention, student support should be: Customized, Comprehensive, Coordinated and Continuous.<sup>86</sup>

CUSTOMIZED					
Individualized	dividualized Optimize each student's healthy development and readiness to learn.				
Universal	Assess each student's strengths and needs.				
COMPREHENSIVE					
Whole child	hild Assess each student's strengths and needs across all developmental domains—academic, social-emotional, health, and family.				
Multi-tiered	Evaluate the intensity of support required in each domain—from preventive to intensive—which may differ for each child in each domain.				
COORDINATED					
Intentional	Through a culturally sensitive lens, and in collaboration with teachers, students, and their families match each student with resources and opportunities aligned with the domains and intensities their individual needs and strengths in order enhance protective factors and mitigate risk factor. Because of the diversity of student needs and strengths, high quality matches likely require connections to resources located in the school and in the community.				
Organized	Collect and organize information about school- and community-based resources to increase efficiency and quality of match between child and resources and opportunities. Establish ongoing, reciprocal communication and information sharing, consistent with privacy laws, regarding student needs and progress.				
CONTINUOUS					
Systemic	ic Integrate this process into the functioning of the school, creating a cyclical approach that allows for follow-up and responds to changes for each child over time.				
Accountable	Evaluate fidelity of implementation and impact. Use this information to improve quality and efficacy of implementation.				

### Evidence of impact on student learning outcomes

A 2014 national research review by Child Trends looked broadly at approaches to integrated student support in the field. They found evidence meeting scientific standards from only three programs: City Connects, Comer School Development Program, and Communities in Schools. Upon review of multiple studies, Child Trends concluded that "There is emerging evidence … that ISS [integrated student support] can contribute to student academic progress as measured by decreases in grade retention and dropout, and increases in attendance, math achievement, reading and ELA achievement, and overall GPA."<sup>87</sup>

The Child Trends research review showed that City Connects is one of the nation's most rigorously evaluated and effective approaches to integrating student supports. Housed within the Boston College Lynch School of Education, City Connects was designed to operationalize insights from the developmental sciences, and test whether they would have an impact on students.<sup>88</sup> Co-designed by researchers and Boston Public School principals, teachers, families, and area community agencies, City Connects presently operates in over 85 urban public, charter, and parochial schools in 10 cities across five states. About 90 percent of students served

by City Connects are low-income, 20 percent are learning English, and 19 percent receive special education services.

Each fall, every teacher in a City Connects school meets with a master's-level City Connects coordinator, usually a social worker or school counselor, to discuss every child in their class. Informed by insights from developmental science, the coordinator taps into the teacher's knowledge and observations regarding each student's strengths and needs across multiple domains of development (academic, social-emotional, health, and family). The coordinator then assesses the complexities interfering with each child's learning and healthy development on a continuum ranging from "no risk" to "severe risk" across each domain.

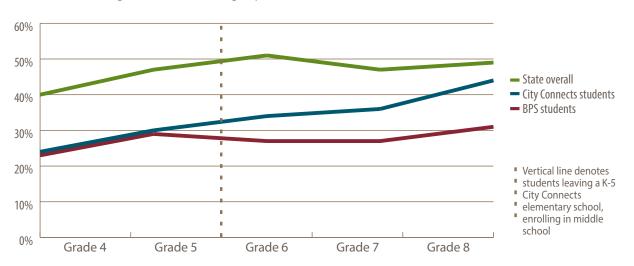
Based on the profile of the child that emerges from the

"There is emerging evidence ... that ISS [integrated student support] can contribute to student academic progress as measured by decreases in grade retention and drop out, and increases in attendance, math achievement, reading and ELA achievement, and overall GPA."

teacher's feedback and observations, and in consultation as needed with the family and school staff, every child then receives an individualized support plan detailing the tailored services, resources, and opportunities needed to optimize the child's readiness to learn. The coordinator is responsible for ensuring that each plan is implemented. To meet the complex of children's needs, City Connects establishes partnerships with community providers in order to access resources outside of the school. These partnerships collectively provide a range of prevention, early intervention, crisis intervention, and enrichment services.

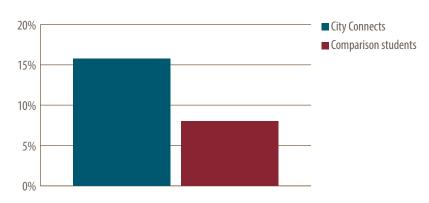
An evaluation of over 7,900 students published in the prestigious *American Education Research Journal* found that students in Boston's K-5 elementary schools, served by City Connects, experienced significant long-term gains. City Connects students outperformed comparison-school peers on report card scores in elementary school. After leaving the intervention, they demonstrated significantly higher scores on statewide English language arts and mathematics tests than peers who never experienced City Connects in elementary school.<sup>89</sup>

Students attending City Connects elementary schools demonstrated improved effort, behavior, attendance and grades. When followed into 8th grade, they close half of the achievement gap in English and two-thirds of the achievement gap in math relative to the Massachusetts state average (Table 5).<sup>90</sup>





When followed into 12th grade, their high school dropout rate is cut by almost 50 percent.<sup>91</sup> Subgroups, including immigrant students and students learning English, also experience significant benefits.<sup>92</sup> Separate analyses have also found that positive effects of City Connects seen overall for low-income children are also occurring for African-American and Latino boys, two groups at especially high risk of dropout in Massachusetts and nationally (Table 6).<sup>93</sup>



#### TABLE 6. Percentage of students who dropout from high school

Proportions adjusted for demographic student characteristics. Comparison N=19,979, City Connects N=2,265

The Comer School Development Program also showed some positive effects on student outcomes. Founded in 1968, based at the Yale University School of Medicine and Child Study Center, and active in multiple school districts, the program "provides the organizational, management and communication framework for planning and managing all the activities of the school based on the developmental needs of its students." The Comer approach includes the creation of three organizational structures: (1) The School Planning and Management Team which sets school-wide goals and coordinates activities including staff development; (2) The Student and Staff Support Team which coordinates the school's student services, accesses resources outside of the school, addresses individual student needs and creates prevention programs; and (3) Parent Team which involves families in supporting the school's social and academic activities.<sup>94</sup> Evaluations of the program found changes in students' psychological and social outcomes, such as students' attitude and behavior, and some improvement in reading and math test scores.<sup>95</sup>

A report commissioned by Communities In Schools, a model which combines partnerships aimed at the whole school with targeted interventions aimed at a sub-set of students within the school, also found positive effects on student outcomes. An organization with over 2,300 school sites, Communities In Schools has a coordinator work with school staff to identify school needs and students at risk of not graduating. The coordinator establishes relationships with local businesses, social services, health care providers and parent and volunteer organizations to provide resources. These include school-wide programs, targeted programs, and individualized support for at-risk students.<sup>96</sup> According to researchers, sites that implemented the Communities In Schools model with fidelity experienced reduced high school dropout rates.<sup>97</sup> Moreover, the children who received individualized supports demonstrated improved academic performance, attendance, and behavior, and were more likely to stay in school.<sup>98</sup>

Elsewhere additional data is beginning to emerge. Reviews of data reported by community schools across the nation also indicate positive impacts on students.<sup>99</sup> Though the implemented models vary widely, community schools generally emphasize the school as a community center, access to comprehensive social services, parental involvement, and before- and after-school opportunities. Although scientific evidence of community schools' effect on student outcomes is not yet clear, one team of researchers reviewed the literature on the activities most often characterizing community schools and found positive associations between these activities and reduced dropout, academic achievement, and reductions in risky behavior.<sup>100</sup>

Other researchers report that community schools are associated with improved attendance, effort, on-time promotions, and reductions in disciplinary issues and dropout rates.<sup>101</sup> In one survey of 49 different community schools, it was reported that, "Thirty-six of the 49 programs reported academic gains. These gains generally included improvements in reading and math test scores, looked at over a two- or three-year period. Many of the programs reporting academic gains were in elementary schools. In at least eight of the cases, the outcomes were not school-wide. Rather, they were limited to students who received special services, such as case management, intensive mental health services, or extended day sessions."<sup>102</sup>

Over 150 school districts including New York, Chicago, Baltimore, Cincinnati, Albuquerque, Tulsa, and Lincoln, NE have invested in varying community school models.<sup>103</sup> In Cincinnati, for example, sizeable capital investment in new facilities and on-site programs created Community Learning Centers in 2000. Supported by the Strive Partnership, a group of 300 people from across the Cincinnati community dedicated to aligning resources to improve student outcomes, the centers coordinate over 600 community partners, and provide services that include counseling, nutrition services, family engagement, home-visiting, after-school and early childhood programs.<sup>104</sup> According to an Institute for Educational Leadership 2013 report, students who received services made two to three times the gains in English and Math than their peers who did not, and the city's high school graduation rate increased from 51 percent to over 80 percent.<sup>105</sup> Today, Cincinnati is recognized as the state's top performing urban school district.<sup>106</sup>

In Massachusetts, the federal Race to the Top grant funded a Wraparound Zone (WAZ) initiative in six communities: Fall River, Holyoke, Lynn, Springfield, Wareham, and Worcester. Aimed at four priorities, including school culture, identifying and addressing students' social emotional and non-academic needs, creating community partnerships and coalitions, and district wide systems of support, each community responded in their own way. The American Institutes of Research reviewed the impact in 30 schools and concluded that, "students in WAZ schools performed better on the Massachusetts Comprehensive Assessment System (MCAS) English language arts (ELA) and mathematics assessments as compared to students in comparison schools."<sup>107</sup> The state of Ohio reports similarly disproportionate gains in student achievement in its community schools.<sup>108</sup>

In sum, evidence of the efficacy of integrated support to create the conditions for academic progress and student achievement is growing, and aligns with our understanding of human development from neurology, psychology, and other developmental sciences.

These findings attest to what many have long suspected: schools cannot do it alone. "A strength of this approach that may not be present in many other school-based models is the emphasis on leveraging community resources to remove barriers to learning, to complement services and supports provided within the school setting," write the authors of the Child Trends research review.<sup>109</sup> Evidence shows that this approach can be both effective in improving student learning outcomes, and cost-efficient for society.

### III. Economists find well-implemented integrated student support can produce a return on investment to society of \$3 in benefits for every \$1 in costs

### Evidence of return on investment

The costs of providing comprehensive, integrated student supports to improve learning outcomes and life prospects for Massachusetts students turn out to be significantly smaller than the benefits. A study of a functioning integrated student support system shows what is possible. Columbia University Economist Henry Levin and colleagues assessed the benefit: cost ratio of City Connects in Boston. They determined costs using the "ingredients" methodology, widely recognized for its accuracy because it catalogs, quantifies, and then matches with pricing information all resources used in implementation.<sup>110</sup> They found that when accounting for the costs of the program alone, \$11 in benefits was produced for each \$1 expended. That means if all public and private Massachusetts expenditures on education, social services, afterschool and mentoring programs, health services, and mental health services for children and families were the same as they are now, and City Connects were deployed statewide, an investment of \$1 million in the program would produce \$11 million in benefits to society.<sup>111</sup>

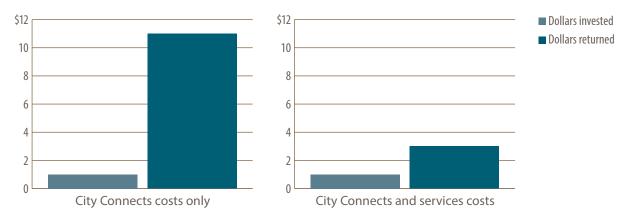


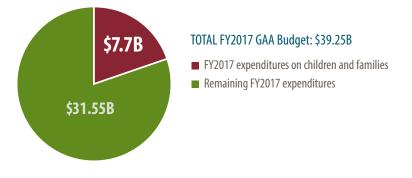
TABLE 7. Costs compared to benefits

However, Levin and colleagues then asked a more complex question: are the benefits to society worth the cost if we consider not only the cost of the program, but also the costs of all public and private resources to which children and families are connected? In short, the answer is yes. When including the costs of services to which children and families are connected—like health care, after school programs, food, and other social services—the return on investment remained positive, yielding a ratio of \$3 in benefits for every \$1 invested (Table 7).<sup>112</sup> Similar return on investment results were reported by Child Trends researchers for a program known as Say Yes to Education.<sup>113</sup>

The return on investment analyses show that effectively implemented integrated support means the Commonwealth will need to spend less on welfare, remedial education, criminal justice, and health issues linked to lower socio-economic status.<sup>114</sup>

Today, Massachusetts spends approximately \$7.7 billion or roughly 20 percent of the total state budget on children ages 0-18 across education, health, human services, and economic development sectors (Figure 3). One way to make these, and future, funds go further is to improve the coordination and efficiency of use. Integrated student support demonstrates that the benefits of driving the right resources to the right child at the right time are experienced widely: better educated citizens and workers, and fewer reliant on welfare or engaged in the criminal justice system.





SOURCE: Internal analysis of FY2017 GAA Budget

Investments in systemic approaches that more efficiently and effectively use existing resources are pressing in light of public budget trends. At the federal, state, and local levels, increasing portions of the budget are committed to social security and pensions, health care, and debt service. This leaves fewer and fewer resources to invest in education and social services for children and their families, despite rising need.<sup>115</sup>

Integrated student support is a promising strategy. It "demonstrates 'collective impact' or what schools, communities, and government agencies can help students to achieve when available resources are aligned; and allows for 'cost-sharing' across tax payers, corporations, and philanthropies since the costs of services lev-

eraged for children are spread across public agencies, non-profits, philanthropies, and businesses. On the other hand, our failure to effectively integrate supports for students produces costs—human and monetary that don't show up on the balance sheet of any one organization but are familiar: persistent achievement gaps, inequality, low social mobility, reliance on public assistance, incarceration.<sup>° 116</sup>

To meet the increasingly acute needs of students, communities in Massachusetts and across the country have been taking action—action from which we can learn. benefits of driving the right resources to the right child at the right time are experienced widely: better educated citizens and workers, and fewer reliant on welfare or engaged in the criminal justice system

# IV. Models in schools and communities across the country offer opportunities to study implementation

There is a proliferation of activity to meet the comprehensive needs of students so that they can be ready to learn and engage in school, all falling under the umbrella of "student support." Student support services are a core function of schools and may focus to varying degrees on a child's academic, social-emotional, health and physical wellbeing and other needs. These supports may be provided directly by school personnel or in partnership with an external organization. As we will see, current student support efforts encounter common hurdles to providing effective integrated student support, while active experiments to deliver comprehensive services in communities across the country offer guiding practices and systems to inform infrastructure building for implementation at scale.

### What's happening in Massachusetts

Massachusetts has many thriving examples of schools addressing the comprehensive needs of students as part of a Tiered System of Support approach, a community school model, a City Connects school, or a home-grown set of partnerships. However, a recent study by MassINC and the University of Massachusetts Donahue Institute looked at the current state of student support in the state's 26 low-income Gateway City school districts. They found that most Gateway City districts have school-based student support teams, with 15 districts reporting teams in all elementary schools, 16 in all middle schools, and 17 in all high schools. The teams are comprised of some combination of staff that may include school administrators, special education teachers, adjustment counselors, general education teachers, the school nurse, school psychologist, and guidance counselors. Though there is substantial variation in what student support teams do from school to school and from district to district, in general the teams "develop appropriate plans to meet the individual needs of children who require additional social and emotional support."<sup>117</sup>

Yet even with careful planning, schools are challenged to integrate comprehensive supports that go beyond social emotional support, including identifying available community-based resources, finding gaps in availability of certain services, managing and aligning partnerships, measuring impact, and addressing costs of coordination and services.

### Identifying services and supports

School personnel's awareness of the resources available outside of school to meet student needs can vary significantly. Many teachers tell us they lack the knowledge, time, or job role to make connections between students in need and resources in the community. One teacher described keeping the name of a social worker she had met at a party in her desk drawer in case she needed help beyond what her school could offer. Another teacher described paying out of pocket for extra winter coats and school supplies to ensure that her students could play at recess and complete their assignments while in school, but expressed having no idea what to do beyond those temporary, stop-gap measures.

Principals and superintendents in small to medium-sized towns often know who the local social service, afterschool, and health providers are. Many report positive collaborations and good relationships, while ac-knowledging significant barriers to coordination and communication when it comes to connecting students to available resources.

Student support staff, teachers, principals, and superintendents in larger towns and cities may or may not know of community-based agencies, but seldom the broad provider network that exists. An observer in Brockton noted, "Our community is rich in resources and programs, but no one knows about them. It's typical of any urban school district, but resources are siloed and it's indicative of what's happening across the state."<sup>118</sup> Moreover, most report that school personnel are already so busy with their day to day jobs, that there is little capacity for the time consuming tasks of coordinating with students, families, school-based support teams, and community agencies. Though this is a core function of school counselors as defined by the American School Counseling Association, it is often a challenge given current school capacities and tools available.<sup>119</sup>

Knowledge of and capacity to leverage the resource ecosystem for children is further complicated as more and more resources for learning, and even in some cases, meeting basic needs, migrate on-line. Personalized learning resources, mentoring programs, even non-profits willing to ship shoes and jackets long distances can augment the local set of resources available to students. Add in federal, state, and regional networks such as anti-poverty agencies, family resource centers, and mental health provider networks, and it becomes increasingly challenging for educators to know where to turn to connect a child to the right set of resources and opportunities.

Moreover, once a resource is identified, it can vary significantly from another offering with a similar name. Not all "afterschool programs," for example, are alike. One may be a great fit for a child who enjoys athletics, needs homework help, and a late pick up time because her parent works until 8:00pm. Another may be right for a child who enjoys art, theater, and needs to be close to her grandmother's house for pick up at 5:30pm. Understanding both what each individual child needs, and which resources are best aligned with those needs, requires an additional layer of information often unavailable to personnel in schools.

### Finding gaps in availability of certain services

"Although districts describe strong collaborations with community partners, they also see significant gaps in the availability of services and systems required to coordinate the care delivered by community providers with services offered in school settings," write UMass Donahue Institute and MassINC.<sup>120</sup> Participating cities cite the need for improved access to youth development programs and mentoring partnerships. Especially acute is the dearth of availability of intensive therapeutic services, mental health day programs, out-patient therapy, and trauma-focused therapy, cited by two-thirds of Gateway City districts.<sup>121</sup>

When children have intensive needs, some districts turn to a clinical team which may invite parents, community-based mental health providers, and district-level administrators to help address a student's complex challenges. "However," researchers note, "these collaborative efforts do not necessarily translate into care coordination. ...[D]istrict leaders highlighted systemic problems when trying to coordinate and access services with community-based mental health providers and state agencies. ...[T]hey reported there is often a lack of communication to support alignment of [in-school and out-of-school] services."<sup>122</sup>

### Managing and aligning partnerships

Despite the best efforts of student support staff, "schools simply do not have the capacity to provide all of the services and enrichment opportunities" children need to be ready to learn.<sup>123</sup> To address the complex of

challenges and the "opportunity gap" experienced by many students, local schools have partnerships with community agencies and institutions.

External organizations are frequently engaged through traditional school-community partnerships. These result from "an intentional effort to create and sustain relationships among a K-12 school or school district and a variety of both formal and informal organizations and institutions in the community."<sup>124</sup> For example, a school may or may not have a partnership with a community-based provider for mental health counseling, or as in Framingham, dedicate a clinical care coordinator to be a liaison between local hospitals, families, and schools to facilitate transitions in and out of school for medical or mental health reasons.<sup>125</sup>

"Most schools, particularly in urban areas, now have an array of community partners who deliver a specific service or set of services to schoolchildren (e.g. health services, mental health services, violence prevention, curricula, afterschool programs, parent groups, etc.). However, 'more' in this case is not necessarily 'better.' ... [S]chools are often 'over-run' with well-intended community partnerships without the structure and processes required to enable the partners to be effective."<sup>126</sup> Lack of coordination across partners can result in overlapping roles and functions, such that numerous outside agencies unknowingly offer similar services or programs to the same students.<sup>127</sup> A 2012 survey of community partnerships within the Boston Public Schools mirrors this observation. "Managing partnerships is time-intensive work often not seen as central to a school's core academic mission, and usually falls to hard-pressed staff who already have a long list of other responsibilities."<sup>128</sup> It found that two-thirds of responding schools designate someone to coordinate partnerships and student support, but that responsibility was typically spread across multiple staff members or represented 20 to 40 percent of one person's time.

The Massachusetts Department of Education described the experiences of six communities participating in the Wraparound Zone initiative this way:

"Student support systems were tougher to work on—and the end goal was often less clear. Compared to school culture, improving student support procedures to make them more proactive and holistic proved slower-going and more challenging. This aspect of wraparound work quickly bumped into existing clutter structures (this team, that team), staffing capacity (this role, that role), diverse or siloed administrative procedures and paperwork, and loads of school by school variation. What helped? One district, Springfield, adopted an existing model, City Connects. Staff felt this gave them a "gold standard" approach to universal student support and provided major implementation short cuts. They had a common blueprint, toolbox, methods, training program, and language for their work. Proprietary models come at price, however, and may not be a viable option for many districts.

Other Wraparound districts, meanwhile, organized their own internal design process to re-envision and develop (and often negotiate) a common approach across schools. This process is still very much a work in progress for some of them. Developing a common or standardized student support system across schools is hard. The decision to do so requires intentionality and comes with heavy lifting (leadership vision, staff time, a good design process). Districts should recognize this going in...but it does not diminish the vital need to do it."<sup>129</sup>

Reflecting the perspectives of educators, researchers find that current approaches to student support often "(a) are fragmented and idiosyncratic, serving a small number of high-needs students; (b) fail to address the full range of student strengths and needs, focusing mainly on risk; (c) lack effectiveness data; and (d) require

minimal teacher engagement.<sup>130</sup> Moreover, "As the number of community supports available to students have begun to increase, schools are challenged in three major ways: (1) identifying which services and supports are appropriate for individual students; (2) managing partnerships and aligning them in a meaningful way with the work of the school, and (3) measuring the impact of these supports on outcomes such as student achievement and thriving.<sup>131</sup>

### Learning from integrated student support approaches

What can we learn from schools and programs dedicated to integrating comprehensive supports and opportunities for students? Approaches vary on many important dimensions, typically relating to how schools and communities implement connecting children to both academic and non-academic supports. Using the principles of effective practice described above as a framework,<sup>132</sup> programs offer varied answers to the following questions:

#### Customized

- To what extent will supports be universal?
- To what extent will supports be personalized to each student?

#### Comprehensive:

- What are the strengths?
- What are the needs?
- Which needs will be addressed?
- Will resources cultivate student strengths as well as address needs?
- Will resources be tailored to meet the varied intensities of student needs?

#### Coordinated

- Who initiates and sustains resource coordination efforts?
- Which structures will be aligned to support resource coordination, and how will they be prioritized?
- How will resources be coordinated and by whom?
- How is information organized?
- How is information communicated among family, student, and school?

#### Continuous

- To what extent is resource coordination integrated into schools' core student support operation?
- How is accountability for improving student learning outcomes assured? What metrics and outcomes are used?

Though impossible to illustrate every combination of answers developed by communities and programs across the nation and here in the Commonwealth, these questions help us to see the range of approaches programs and practitioners in the field use to address student needs through resource coordination (Table 8).

### TABLE 8. Learning from the field

PRINCIPLES	QUESTIONS	EXAMPLES
Customized	To what extent will supports be universal? To what extent will supports be individualized to each student?	<b>Communities In Schools</b> provides certain resources to the entire school and individualized resources to case-managed students who constitute about 10-15 percent of the school population; <sup>133</sup> <b>BARR Center</b> cultivates relationships between school staff and all students in order to know each student's specific strengths and needs, providing high-risk students with customized interventions and referrals to external services; <sup>134</sup> <b>City Connects</b> provides each child in a school with personalized tailored supports and assists schools in managing outside partners. <sup>135</sup>
Comprehensive	What are the strengths? What are the needs? Which needs will be addressed? Will resources cultivate student strengths as well as address needs? Will resources be tailored to meet the varied intensities of student needs?	<b>Turnaround for Children</b> establishes partnerships between schools and a community mental health agency; <sup>136</sup> A version of a <b>community school</b> , <b>Codman Academy Charter School</b> in Dorchester, MA is built adjacent to the Codman Square Health Center and leverages area institutions like a theater and YMCA for enrichment and afterschool opportunities; <sup>137</sup> <b>Bright Futures</b> , which operates in rural communities, establishes a local leadership committee that promises to meet the basic needs of any child that cannot be fulfilled by area organizations; <sup>138</sup> <b>City Connects</b> assesses the individual strengths and needs of every child across multiple domains of development and matches each child to a set of in-school and community-based resources and enrichments. <sup>139</sup>
Coordinated	Who initiates and sustains resource coordination efforts?	Harvard's <b>By All Means</b> initiative has six mayors leading citywide child wellbeing and education resource integration efforts; <sup>140</sup> <b>Strive Together</b> is a national network of 64 communities building cradle to career systems for children led by neutral backbone anchor institutions; <sup>141</sup> <b>City Connects</b> facilitates collaboration and coordination once invited by a superintendent, mayor, or foundation who obtains the interest of the schools and presently serves 85 schools in five states. <sup>142</sup>
Coordinated	Which structures will be aligned to support resource coordination, and how will they be prioritized?	Harlem Children's Zone focuses on improving child outcomes through neighborhood concentration of supports along the lifespan including Baby College for new parents, preschool programs, charter schools, college and career counseling, health and fitness, food and other social services; <sup>143</sup> Say Yes to Education seeks to realign district and school- level structures, and establish community- wide collaboration, aimed at providing district-wide comprehensive services to students; <sup>144</sup> Comer School Development Program aligns school structures and practices to support child development; <sup>145</sup> Turnaround for Children concentrates on teacher professional development and coaching, trauma sensitive school environments, and mental health counseling for select students; <sup>146</sup> City Connects focuses on changing the course of individual child development while supporting teacher and principal classroom and school improvement efforts. <sup>147</sup>

PRINCIPLES	QUESTIONS	EXAMPLES
Coordinated	How will resources be coordinated and by whom? How is information organized?	<b>Community schools</b> like <b>Cincinnati's Community Learning Centers</b> locate services like food pantries, health centers, recreation and afterschool programs in schools and have site-based resource coordinators (provided by local non-profits) who may use the Learning Partner Database which allows for information exchange between schools and select local agencies; <sup>148</sup> <b>New Bedford Public Schools</b> is placing wraparound coordinators in schools to help troubleshoot and connect children to resources; <sup>149</sup> <b>City Connects</b> surveys and analyzes the resource landscape in each school and in the surrounding community and the coordinator, overseen by a district level program manager (both of whom are masters' level social workers or school counselors), matches students to a tailored set of existing resources with the help of a proprietary technology system. <sup>150</sup>
Continuous	To what extent is resource coordination integrated into schools' core student support operation?	<b>Communities In Schools</b> brings a set of outside partners into a school to provide services to the student body, and in some locations participates in the school's student support team; <sup>151</sup> <b>Higher Ground Boston</b> helps identify outside partners that meet a school's self-identified needs; <sup>152</sup> <b>City Connects'</b> full time site coordinator talks to every teacher about every child every year, participates in the school-wide student support team, is an active member of the school community, is a hub for information about students, and connects children and families to resources and opportunities. <sup>153</sup>
Continuous	How is accountability for improving student learning outcomes assured? What metrics and outcomes are used?	<b>Strive Together</b> communities identify shared goals and shared metrics related to the scope of collaboration, and established new measures of child outcomes, and more; <sup>154</sup> <b>City Connects</b> uses metrics to assess fidelity of implementation and inform coaching on a defined practice and assesses child-level outcomes using data collected by schools. <sup>155</sup>

From these widely varying approaches, we can learn about adaptations in urban, suburban, and rural communities. We can learn about different ways in which technology has been leveraged, and common challenges overcome. And we can learn about approaches in Massachusetts and beyond that are effective in producing improved learning outcomes.

In short, the multiplicity of approaches and adaptations in use in the field, combined with an understanding of principles of effective practice and a growing evidence base, offer a rich pool of practical guidance from which practitioners across the Commonwealth can learn as they continue to seek ways to more effectively address the social, emotional and health needs of students. An emphasis in Massachusetts on the factors beyond academics that can impede learning builds on a foundation in both practice and policy, that sets the stage for effective integrated student support.

# V. Massachusetts has the foundation in policy and practice to make comprehensive, integrated student support available in any community that chooses it

In recent years, the Massachusetts legislature and executive agencies have taken several important steps to support resource integration for students.

One of the first significant pieces of legislation was An Act Relative to Children's Mental Health (2008) which established a Behavioral Health and Public Schools (BHPS) Task Force.<sup>156</sup> Among the responsibilities of the BHPS Task Force was to promote collaboration between schools and providers of behavioral health services. In its final report issued in 2011, the Task Force presented a self-assessment tool to gauge implementation of a framework with three levels of support woven throughout it: creating safe and supportive school environments that are conducive to students' emotional well-being; providing preventive supports and services so that schools can detect and intervene early to address behavioral health symptoms; and delivering intensive services for students with significant behavioral health needs.<sup>157</sup>

Building on the work of the BHPS Task Force, and a 2010 bullying prevention and intervention law,<sup>158</sup> the Legislature passed An Act Relative to the Reduction of Gun Violence in 2014. It established the Safe and Supportive Schools Commission to advise the Department of Elementary and Secondary Education on statewide implementation of the Safe and Supportive Schools framework,<sup>159</sup> and instructs the Department of Elementary and Secondary Education to provide technical assistance to schools as they implement the framework.<sup>160</sup>

Simultaneously underway were an array of inter-agency coordination efforts focused on resource integration for children both inside and outside of school. Most visible was the Child and Youth Readiness Cabinet established by Governor Patrick via Executive Order.<sup>161</sup> The purpose of the cabinet was to foster inter-agency coordination and collaboration to improve services to children, youth and families across the Commonwealth. The cabinet was chaired by the Secretaries of Education and Health and Human Services, and included the state secretaries of Administration and Finance, Housing and Economic Development, Labor and Workforce Development, Public Safety, and the Child Advocate. Building on the Patrick Administration's report, *Ready for 21st Century Success: The New Promise of Public Education*, the cabinet pursued two initiatives: (I) to oversee creation of an Early Warning and Dropout Prevention system designed to alert districts to students at risk of school-failure so they can provide targeted and timely interventions; and (2) to offer recommendations for development of a statewide child and youth data reporting system that would facilitate the transfer of child-level educational and human services data as students move to different schools and communities.<sup>162</sup>

Upon taking office in January 2015, Governor Baker disbanded the formal cabinet structure, but continues to advance the work of inter-agency coordination and collaboration in targeted ways that impact the lives of students. For example, the Interagency Council on Housing and Homelessness seeks to prevent and address family and individual homelessness by coordinating the services administered by the Executive Office of Health and Human Services and the Executive Office of Housing and Economic Development.<sup>163</sup> A statewide network of 18 Family Resource Centers located in new or existing community-based organizations is funded by the Executive Office of Health and Human Services and the Department of Children and Families. The aim is to support families of children from birth to age 18 by providing services like parenting programs,

support groups, early education and care, and information about education options, housing, legal services, health care services, career skill building and financial planning opportunities, and other information and referral services.<sup>164</sup>

Progress on the Department of Elementary and Secondary Education's Early Warning Indicator System (EWIS) has also continued under Governor Baker and Secretary of Education James Peyser. Active since the 2011-2012 school year, the EWIS permits districts to identify students in grades 1-12 who may be at risk for missing key academic benchmarks.<sup>165</sup> Although use of the EWIS is evolving across districts, and some have elected to implement local versions of an early warning system, the ultimate aim is to wed student identification with prevention and remediation. Many districts are also using the Massachusetts Tiered System of Support (MTSS), which outlines "a single system of supports that is responsive to the academic and non-academic needs of all students" and provides "a continuum of multiple supports to meet their needs."<sup>166</sup> This includes universal screening, developing an understanding of students' individual academic and social-emotional needs, assigning school- and community-based supports to address those needs, and monitoring students for progress on key benchmarks.<sup>167</sup>

The current department is continuing to develop the EWIS and MTSS, as well as building its capacity to provide local school districts with cross-agency administrative data that may ultimately enable improved early warning detection and better service delivery. Students whose families are eligible for the Supplemental Nutritional Assistance Program (SNAP) or Transitional Aid to Families with Dependent Children (TAFDC) may receive "direct certification" and be automatically enrolled in the school's Free or Reduced Lunch program, for example.<sup>168</sup> And a pilot program implemented in 2014-15 allows schools to match enrollment lists with a list of MassHealth, or Medicaid, members to similarly assist with "direct certification" of students who are eligible for the Free or Reduced Lunch program.<sup>169</sup>

In 2015, the Board and Department of Elementary and Secondary Education made it a core priority of the education system to "support the social-emotional learning, health, and safety" of all students.<sup>170</sup> In tandem to this new strategic direction, the Safe and Supportive Schools Commission is developing a statewide framework to help schools chart a plan that integrates social-emotional learning, behavioral health, positive discipline, trauma-sensitivity, and other initiatives to help students learn more effectively.<sup>171</sup> Core elements of this framework highlight importance of integrating school- and community-based resources to meet the comprehensive needs of students and families, and six communities are engaged in planning local "systems for student success" under the Safe and Supportive Schools grant program.<sup>172</sup>

Rapidly evolving commitments to address the comprehensive needs of students and families in Massachusetts' elementary and secondary sector build upon ongoing state-supported work at the intersection of K-12 and early education and care. For example, through the Department of Early Education and Care, the Commonwealth's children ages zero to five are served by 86 Coordinated Community and Family Engagement (CFCE) grantees that cover the state. Seventy of these grantees are local school districts. Core to the CFCE's mission is to "provide all families with access to locally available comprehensive services and supports that strengthen families, promote optimal child development, and bolster school readiness."<sup>173</sup> In addition, with funding from the federal Race to the Top grant and support from the National Governor's Association, Massachusetts helped a dozen communities to build local Birth to Grade Three systems, which frequently include multifaceted support services for students and families through community partnerships.<sup>174</sup> These state-level efforts to foster resource integration for children, both inside and outside of school, are aligned with a federal emphasis on integrating comprehensive supports for students, and federal support of cross-sector collaboration within the Commonwealth. For example, the Centers for Disease Control is partnering with five states, including Massachusetts to implement the Essentials for Childhood Framework focused on reducing child maltreatment.<sup>175</sup> The Department of Health and Human Services' Substance Abuse and Mental Health Services Administration administered a grant that went to nine Massachusetts school districts to promote children's healthy development, reduce youth violence, and increase access to school-based mental health services and community-based resources.<sup>176</sup>

The recently reauthorized federal law known as the Every Student Succeeds Act builds on these prior investments. Though significant legal and implementation decisions remain for the federal Department of Education and the Massachusetts Department of Elementary and Secondary Education, the new law clearly highlights integrated supports and coordination of school- and community-based resources for students. Specifically, provisions in Titles I and IV permit coordination with "community-based services and programs." Numerous grant programs, subject to appropriation, would support partnerships between schools, community-based organizations, universities, and others dedicated to improving student outcomes.<sup>177</sup>

The ESSA returns significant discretion on education policy matters to the states, and includes a requirement that each state submit a plan to the federal government.<sup>178</sup> While ESSA retains many of the accountability requirements of its' predecessor, the No Child Left Behind Act, it also presents opportunities for states to identify for accountability purposes other indicators of student success. In this context, a groundswell of momentum has emerged in Massachusetts around Social-Emotional Learning (SEL). The Collaborative for Academic, Social and Emotional Learning (CASEL) defines SEL as the cognitive, affective, and behavioral competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision making.<sup>179</sup> Coalitions like EXSEL<sup>180</sup> and SEL4MA<sup>181</sup> are organizing to support implementation of effective SEL practices and influence policy, and educational leadership organizations, such as school committees and the Massachusetts Association of School Superintendents, are developing professional development opportunities around SEL.<sup>182</sup> The related movements toward social-emotional competencies and safe and supportive school environments are aligned with and aided by a focus on comprehensive integrated student supports. Just as students are more readily able to gain cognitive or academic skills when they receive supports and opportunities that meet their needs, they also demonstrate improved engagement and readiness to build social-emotional skills.<sup>183</sup>

These recent state and federal policy developments, and practices related to EWIS, MTSS, and Safe and Supportive Schools, and SEL, highlight a growing emphasis in education to improve coordination and collaboration with social services, youth development, health and mental health providers in order to better meet the complex needs of students and their families. Building a system for integrated student support is an evolutionary next step in Massachusetts' education policy and practice.

# VI. An infrastructure for integrated student support can make implementation at scale feasible and cost-efficient

In the UMass Donahue MassINC report on student support systems in the Gateway Cities, the authors write, "Systems to support the social and emotional development of youth are fundamental to the future of Gateway Cities. Leaders inside and outside of school districts must work together to unfurl these systems across the entire community, linking and coordinating resources. [We must take] steps to create the backbone infrastructure for systemic solutions."<sup>184</sup> Former President of the Massachusetts Superintendents' Association and Superintendent of the Fitchburg Public Schools, Andre Ravenelle explains that "districts want a replicable structure so we don't all have to reinvent the wheel."<sup>185</sup>

For the first time ever, we can provide that. We can leverage insights from the developmental sciences, evidence of what works to support student learning and thriving, and the experience of programs and educators to develop a backbone infrastructure that both supports effective practices and allows for local adaptation to a community's specific needs and contexts.

We seek to make it possible for any Massachusetts school district to choose to drive the right resources to the right child at the right time in order to narrow achievement gaps, reduce dropout rates, and improve educational opportunity for all. We also seek to learn about what does and does not work, how various communities in urban, suburban and rural settings are approaching integrated support, the hurdles they are facing, and ways these might be addressed.

To help bring this vision to fruition, The Boston College Lynch School of Education's Center for Thriving Children has assembled leaders from across the Commonwealth to advise on development of an infrastructure through a new initiative called InterconnectED. (See page 35 for a list of members.) Working in close consultation and alignment with state leaders, the Massachusetts Department of Elementary and Secondary Education, the Safe and Supportive Schools Commission, and partner organizations, InterconnectED proposes to help develop an infrastructure to facilitate the local integration of education with social services, youth development, health and mental health resources for Massachusetts' children and families. This infrastructure may include:

**Improving the policy context to better support effective implementation.** Although possible to implement effective integrated support in the current policy climate, it is not without challenges. InterconnectED's policy role can be to surface opportunities to improve existing policies, remove impediments to implementing effective integrated support, and contribute to a policy framework that addresses the relationship between child development, opportunity, academic outcomes, and the Commonwealth's future success.

**Developing communications to disseminate knowledge and describe infrastructure building.** The practices, rationale, and research related to effective integrated support are complex and require translational communications strategies in order to support widespread implementation. Our goals it to make information on effective practices and implementation strategies widely accessible so that effective integrated supports can reach as many children as possible.

**Supporting widespread and effective implementation.** In most schools' present circumstances, effective identification of student needs and the school- and community-based resources best tailored to meet those needs is a nearly impossible, time-consuming task. The financial investment and the number of personnel

required to accomplish this is out of reach for most, if not all, districts, charter schools, and private schools serving children who could benefit. Developing an infrastructure to help localities match students to a tailored set of resources is necessary if schools are to implement cost-effective approaches, undertake practices linked to improved student achievement, and if districts are to stop "reinventing the wheel."

To support schools and communities to effectively integrate supports for children and families, we must consider practical tools to facilitate effective practices such as identifying students' comprehensive strengths and needs, identifying available resources to address those needs, and facilitating connections to both school- and community-based resources. Prospective components could include:

A technology system that supports effective implementation at scale. Existing approaches in the field, including City Connects and the Strive Partnership in Cincinnati, offer starting points on the use of technology. Moreover, there are existing data sources in Massachusetts that can be woven together so that those working directly with students can have information and 21st century tools to assist in making high-quality matches between children in need and school- and community-based resources we have. Technology is key to creating efficiencies, supporting principles of effective practice, and assessing impact on student learning outcomes.

**Guidance on implementation** strategies for local leaders. Bringing together information on strategies from across the country would capitalize on the academic and field-based research underway, and provide case studies to explain how various communities and programs are integrating supports in urban, suburban, and rural settings.

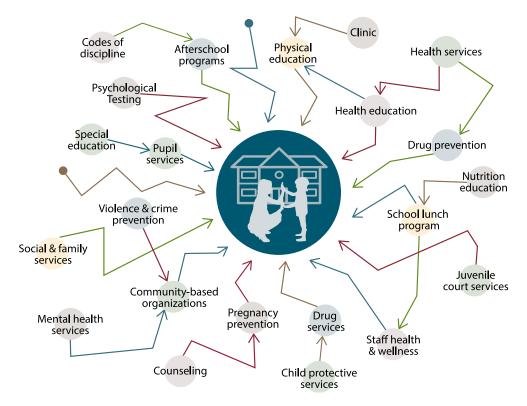
**Professional development** delivered on-line or in person, technical assistance, and other resources for practitioners to support effective implementation. This would provide an opportunity to learn about the types and depths of support needed to make comprehensive, integrated support possible at scale.

A "networked improvement community" among participating communities aimed at leveraging the experience and expertise of implementers in order to accelerate effective intervention and incorporate insights into centralized systems and varied educational contexts. Like a conductor can transform a cacophony of effort into a symphony, an infrastructure can make it possible for schools and communities to transform the existing landscape of public and private investments in children and families into a system capable of driving the right resources to the right child at the right time.

A relatively low cost infrastructure—one that enables existing investments in education, social services, youth development, health, and mental health resources for children and families to be better used—can create service delivery efficiencies yielding broad benefits to society.

By building knowledge of effective practices, and tools to make comprehensive resources integration feasible for schools, an infrastructure can help to transform learning outcomes for students.<sup>186</sup> Like a conductor can transform a cacophony of effort into a symphony, an infrastructure can make it possible for schools and communities to transform the existing landscape of public and private investments in children and families into a system capable of driving the right resources to the right child at the right time (Figures 4 and 5).

#### FIGURE 4. Current resource landscape



SOURCE: City Connects, Center for Thriving Children, Boston College. Adapted from Adelman and Taylor.



#### FIGURE 5. How the resource landscape could be transformed

SOURCE: City Connects, Center for Thriving Children, Boston College. Based on CASEL.

Decision makers at every level—teachers, principals, superintendents, state and federal policymakers—recognize the disconnect between children in need and resources we have. As more and more children enter school with needs, both academic and non-academic that interfere with learning, and as the evidence-base mounts on the importance of leveraging both school- and community-based resources aimed at those needs, educators, principals, superintendents, and municipal leaders are asking for help. Massachusetts can lead the way.

# Conclusion

Massachusetts is uniquely positioned to assemble knowledge and existing building blocks to inform development of an integrated support infrastructure for the 21st century. Advancing earlier efforts and existing models aimed at meeting the comprehensive needs of students, Massachusetts can capitalize on three pillars of potential not previously available, but now present:

**Research.** Home to some of the nation's leading researchers, Massachusetts can readily assimilate what we are learning from education research about the role of "out of school" factors on student achievement; from the developmental sciences about the potential to disrupt a child's negative developmental trajectory and tilt it positive through comprehensive interventions; and from emerging evidence about effective practices to support informed approaches at scale.

**Policy and practice.** The evolution towards effective integrated student support is already underway. As students experience more complex and intensifying barriers to learning due to rising rates of poverty, changing family structures, language hurdles, and attendant physical, social-emotional, and mental health challenges, schools and communities are trying different student support structures, partnerships, and programs to bridge the gap between students and community-based resources that meet their needs. The legislative and executive branches have responded, most recently with a focus on fostering Safe and Supportive Schools, implementing an Early Warning System, testing out Wraparound Zones and Systems for Student Success, and promoting Tiered Systems of Support. These lay a strong foundation for integrated student support.

Aligned infrastructure. A key to making integrated student support possible is to augment limited personnel capacity with knowledge of effective practices, and technology and support designed to make relatively efficient the identification of student need, identification of available resources, and assignment of school- and communi-ty-based services. This system can also support assessment of the impact of supports on outcomes such as student achievement and thriving. Massachusetts has the potential to learn about useful technology infrastructures from a number of models in the field—including City Connects and the Cincinnati Community Learning Centers/Strive Partnership. Moreover, there are building blocks of relevant data at the district and state levels that can form the foundation of a technology system and, like integrated support itself, capitalize on resources we already have.

In the 21st century, Massachusetts' schools need not and cannot do it alone. The Department of Elementary and Secondary Education recognizes the critical role that the agency and schools have to "support social-emotional learning, health, and safety" so that children are ready to learn.<sup>187</sup> At the same time, the 26 Gateway Cities, and other communities around the Commonwealth, are seeking the conditions to be successful with all of their students. They recognize that the resources to address the complex needs students bring into school may reside in the surrounding community—like health centers, food pantries, afterschool programs, mentorships, counseling services—and are seeking a way to make resource integration feasible, cost-efficient, practical, and effective.

The evidence shows that when children growing up in challenging circumstances have the opportunities and supports that all children need to develop, learn, and thrive then they are able to improve behavior, effort, attendance, grades, academic performance, and high school completion.

Integrating student supports is a vital opportunity for Massachusetts to again lead the nation in driving student achievement for all. The Commonwealth has the knowledge, building blocks, and opportunity to lead the nation in closing the opportunity gaps that restrain the talents and potential of more than 40 percent of our next generation.

To do so will require a systemic approach that marshals the resources and leadership of our schools, communities, and Commonwealth to drive the right set of resources to the right child at the right time, over time.

With leadership from the Boston College Lynch School of Education's new initiative, InterconnectED and its statewide Advisory Board, and your help, we can build an infrastructure that addresses the barriers schools and community-based organizations face to resource integration, we can make it possible for schools in every city and town wishing to meet the comprehensive needs of children to do so. We can make it possible to leverage pre-existing investments in educational instruction and community-based services to be more impactful. We can make it possible to cultivate the deep, broad, diverse citizens and workers our Commonwealth will rely upon in the years ahead.

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The Center for Thriving Children's mission is to study the most effective ways to address the out-of-school factors impacting student learning and thriving in schools. The Center serves as a national resource for researchers, training programs, and professional development. The Center is expert in evaluating complex educational interventions and incubates both City Connects and InterconnectED. See www.bc.edu/schools/lsoe/coss.html.

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#### InterconnectED

Grounded in the developmental sciences and evidence-based practices in the field, InterconnectED is dedicated to scaling integration of education with social services, youth development, health and mental health resources to improve learning outcomes. InterconnectED is an initiative of the Boston College Lynch School of Education's Center for Thriving Children. See www. interconnectEDbc.org.

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