



BOA 2020 EARLY EDUCATION & CARE BRIEF

# Boston's Child-Care Supply Crisis: What a Pandemic Reveals

## **About the Boston Opportunity Agenda**

The Boston Opportunity Agenda is a public/private partnership that works urgently and strategically to transform the Boston education landscape from cradle to career. Our focus is on removing the systemic barriers that create unacceptable outcomes and lack of opportunity for historically oppressed and economically disadvantaged populations and creating a just, equitable education system.

## **About the Boston Birth to Eight Collaborative**

Convened by the Boston Opportunity Agenda and the United Way of Massachusetts Bay and Merrimack Valley, the Birth to Eight Collaborative includes parents and more than 200 representatives from early education centers, family child-care, nonprofit organizations, schools, public health, philanthropy and medical institutions.

## **Acknowledgements**

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# TABLE OF CONTENTS

**3 INTRODUCTION**

**5 FINDINGS**

*Pre-COVID Trends (December 2017-March 2020)*

*Immediate COVID Impact (September 2020)*

*Child-Care Providers' Support of Families Is Vital to the State*

**16 METHODOLOGY**

**17 BOA POLICY RECOMMENDATIONS**

*1. Advance the Early Care and Education Profession*

*2. Build a Better Child-Care Business Model*

*3. Increase Access and Affordability for All Families*

*4. Reform Child-Care Financing*

**19 APPENDIX**

**26 ENDNOTES**

# INTRODUCTION

**C**COVID-19 revealed to the entire country what the early education and care field has known for years: Child-care is the backbone of our economy. The current funding model burdens families and providers. Quality is uneven and mostly inaccessible for the families who need it the most. However, the COVID pandemic has also dramatically increased awareness of and discussion about the “child-care crisis” in the United States. A Google search for the phrase “childcare crisis in America” would yield 318,000 results before March 1, 2020. The same search on October 15, 2020, returned about 1,640,000 results.<sup>1</sup> If you feel that you can’t keep up with the proliferation of publications on the topic, you are not alone. The increase in the number of reports, articles and opinions published since March of this year means that the child-care crisis is receiving the attention it deserves—although the needed solutions have still not come to fruition.

The immediate negative impact of COVID on families, providers and the economy is multifold. One national report estimated in July 2020 that 35 percent of center-based and 21 percent of family child-care programs remained closed nationwide; attendance and enrollment were significantly lower in centers that were open; and the cost to provide high quality care was likely to have increased.<sup>2</sup> A Massachusetts study with nearly 700 early education and care providers for 3- and 4-year-old children found that 90 percent of family child-care (FCC) workers reported significant impact on their income and two thirds of all surveyed educators were concerned about their mental health.<sup>3</sup> Another Massachusetts study with nearly 600 families found that parents/caregivers are concerned about sending their children to child-care programs and, at the same time, fear for their ability to participate in the labor market and their productivity.<sup>4</sup>

Governor Baker issued the emergency order for Massachusetts to start on March 23, with child-care programs mandated to close by March 22. The only exception to the order covered programs that volunteered for the Exempt Emergency Child-Care Program that the Department of

*A Google search for the phrase “childcare crisis in America” would yield 318,000 results before March 1, 2020. The same search on October 15, 2020, returned about 1,640,000 results.*

Early Education and Care launched to serve children of essential workers.<sup>5</sup> Overnight, employers across the state had to grapple with a question many of them were not used to: What will working parents do with their kids in order to work? Parents and caregivers that rely on licensed child-care were overwhelmed with the same question—one much more familiar for them. Providers, especially the ones relying solely on private pay families, were concerned with the sustainability of their business and the impact on salaries, wondering: How will we pay our bills? And while waiting for the green light to welcome back children, several providers were asking a worrisome question: Will I be able to reopen?

This is the first of two briefs the Birth to Eight Collaborative will publish following our 2019 first annual landscape of early childhood education and care programs in Boston. In this brief, we report on important questions to help monitor the long-term impact of the COVID pandemic on our local child-care sector. Besides reporting on the impact of COVID on the supply, we needed to take a step back to look at what was happening prior to the pandemic and subsequent to our first report. In that report, using 2017 data, we identified significant access gaps in the city: 35 percent of 0- to 5-year-olds would not have access to early education and care seats if desired by their families. The potential gap for children in the age group of 0–2 years was significantly higher, around 72 percent. All of these gaps varied widely across neighborhoods.

The pandemic is unquestionably affecting everyone, but is also exacerbating pre-existing inequalities, affecting some families and providers more harshly than others.<sup>6</sup> For example, low-income families, parents/guardians working non-traditional hours, and families with children who have unique needs (developmentally or culturally) have been disproportionately impacted by COVID-19. These families have been heavily hit by job losses, but many may still not qualify to receive subsidies. And on the supply side, child-care providers before the pandemic were already twice as likely to live in poverty than other workers, and Black child-care workers were more likely to earn less than \$15/hour compared to White workers. Massachusetts Asian, Latinx and Black providers are more likely than their White counterparts to have a high school diploma or less. It is therefore imperative that state and local policymakers center equity in all proposed solutions to support and rebuild the child-care sector.<sup>7</sup>

Accessible, affordable and high quality nonparental care arrangements are crucial to support child development, participation of working parents/guardians in the economy and employers' access to a greater pool of diverse employees. Licensed child-care programs are the centerpiece of nonparental care and the COVID-19 pandemic has hit this sector of the American economy hard. Licensed child-care programs offering full-time, standard hours care in Boston are the focus of this publication. What were the trends before COVID? What impact did COVID have on these trends? Specifically, we look at the 15 ZIP Code–defined neighborhoods of Boston and the differences between center-based and family child-care. Are there characteristics that either exacerbated or mitigated the impact of COVID on the system?

# FINDINGS

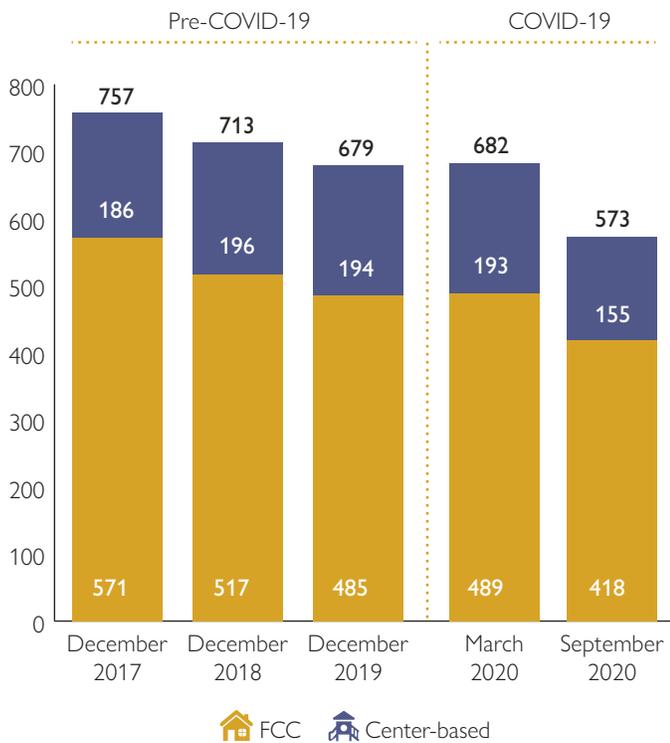
## Pre-COVID Trends (December 2017–March 2020)

**B**oston has been losing licensed child-care programs and seats over time. **FIGURE 1** shows the number of programs (FCC and center-based) in the city between December 2017 and September 2020 and **FIGURE 2** shows the number of seats in these programs. During the pre-COVID period

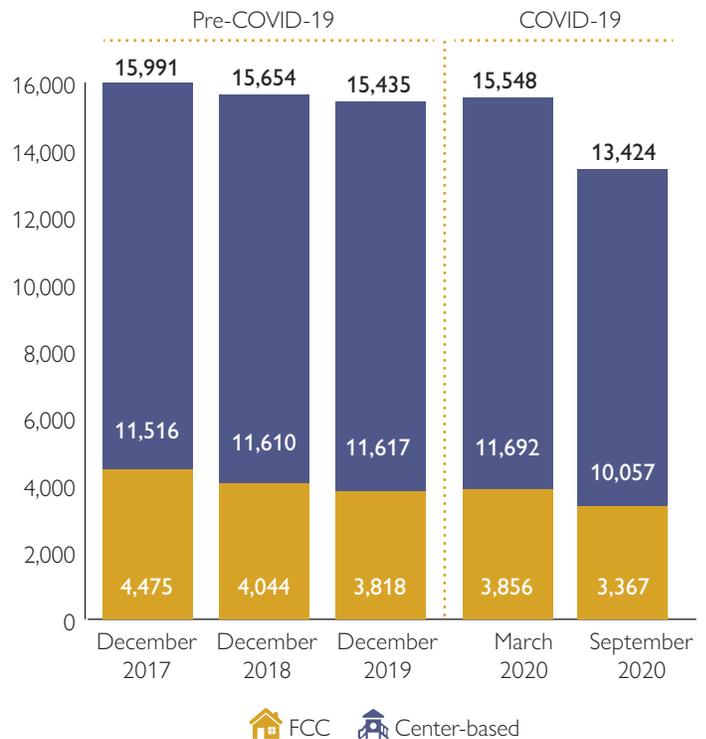
(2017–March 2020), the city had lost around 14 percent of its FCC programs and seats. While the net change for FCC between 2017 and 2020 was negative, we observed a small gain in FCCs between December 2019 and March 2020.

One plausible explanation for the increase in the number of seats (38) comes from initiatives similar to one sponsored by the Boston Mayor’s Office. In 2019, the City launched its first cohort of the Childcare Entrepreneur Fund (CEF), a program aiming to support woman- and minority-owned family child-care businesses and to increase access to child-

**FIGURE 1**  
Number of Licensed Childcare Programs  
(Boston, Dec 2017 – Sep 2020)



**FIGURE 2**  
Number of Licensed Childcare Seats  
(Boston, Dec 2017 – Sep 2020)



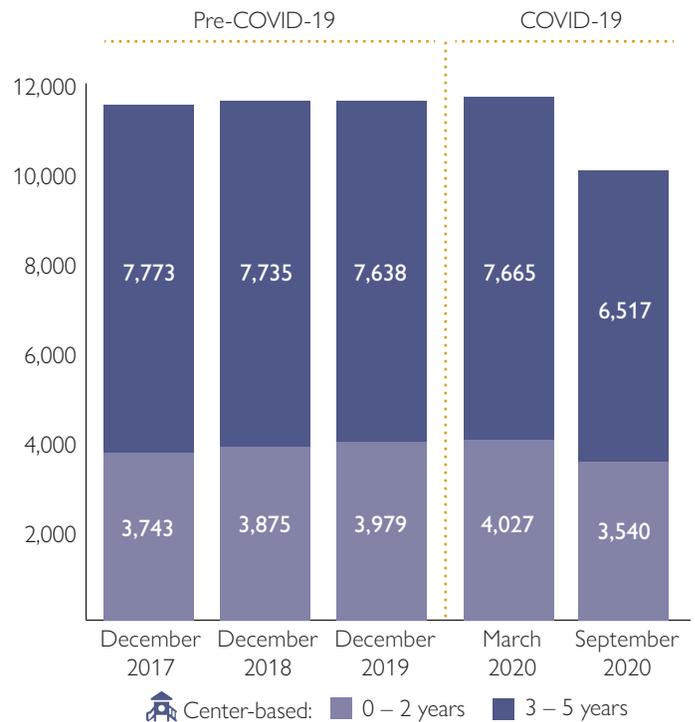
Note: FCC = Family Childcare

Source: MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

care seats for Boston’s families via a one-time monetary award and business training.<sup>8</sup> The initiative was motivated by analysis showing that Boston had lost 55 percent of its FCC programs between 2010 and 2019, a trend that has also been observed across the country.<sup>9</sup> Moreover, as identified by our first report, Boston had high unmet needs for the potential demand of early education and care seats in 2017—35 percent of children 0–5 years of age in Boston would not have access to a licensed slot in their neighborhoods, if desired by their parents.<sup>10</sup> An initiative targeting FCC owners (predominantly women, immigrants and people of color) has the dual potential of increasing access to child-care across the city as well as business revenue for historically marginalized women. Similar initiatives in Massachusetts that informed the City of Boston CEF program include the University of Massachusetts Small Business Innovation Course and United Way Shared Services.

The city slightly gained center-based programs (4%) and seats (1.5%) between December 2017 and March 2020. When analyzing age groups in these programs (see **FIGURE 3**), gain in the number of seats came from the age group 0–2 years (7.6%) with a small loss in the number of seats for the age group 3–5 years (1.4%). Notice, however, that while the number of seats for 3–5-year-olds in March 2020 was smaller compared to December 2017, it had gone up since December 2019. The expansion of Universal Pre-Kindergarten (UPK) programs in Boston, officially launched in September 2019 across 12 neighborhoods,<sup>11</sup> may be one factor that could explain the gain in seats for this age group, although the initiative is primarily focused on building quality in current community-based programs.

**FIGURE 3**  
**Number of Licensed Center-Based Seats, by Age Groups (Boston, Dec 2017 – Sep 2020)**



Source: MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

### NEIGHBORHOODS

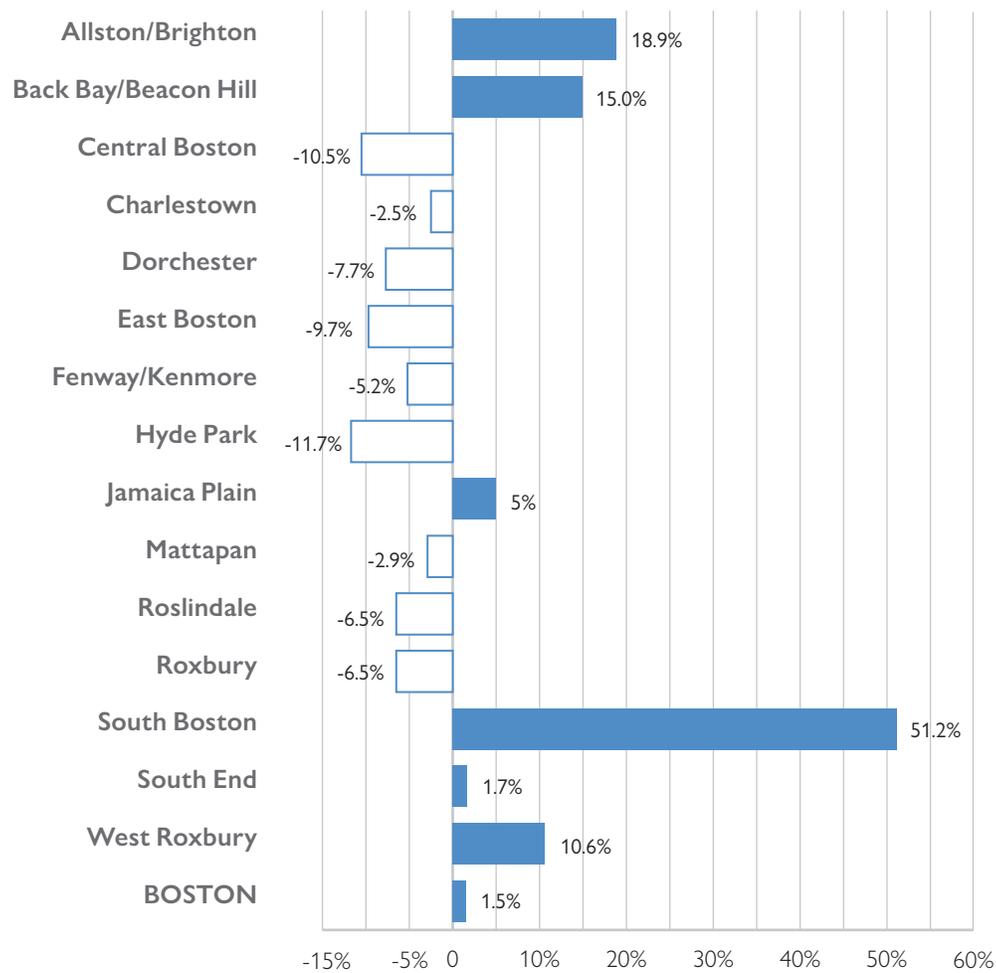
Boston experienced a net loss of 3 percent of its licensed child-care seats for children 0–5 years old between 2017 and March 2020. However, this city-level trend masks disparities across parts of the sector and neighborhoods. The majority (nine) of its 15 ZIP Code–defined neighborhoods were experiencing losses. (See *Appendix, TABLE 2.*) Fenway/Kenmore, Mattapan and Roslindale estimated declines were below the city average (0.2%, 0.3%, and 1.1%, respectively), while the other six neighborhoods had losses above the city average, ranging from 4.1 percent in Hyde Park to 14 percent in Dorchester and 15 percent in East Boston. Conversely, six neighborhoods had experienced gains in the number of seats, ranging from 1 percent in Charlestown to 11 percent in Back Bay/Beacon Hill, and 22 percent in South Boston.

**Program Type.** FCC programs have been losing seats in all neighborhoods,<sup>12</sup> with the exception of Back Bay/Beacon Hill. The decline ranged from 2 percent in Mattapan to 32 percent in Allston/Brighton. While centers have gained seats at the city level over the pre-COVID era, five neighborhoods lost seats: South End (1%), Roxbury (3%), Central Boston (5%), Dorchester (14%) and East Boston (15%). (See Appendix, TABLE 3.)

**Age Groups.** A modest gain in the number of seats occurred for the age group 0–2 years at the city level (1.5%). Nonetheless, the majority of neighborhoods lost

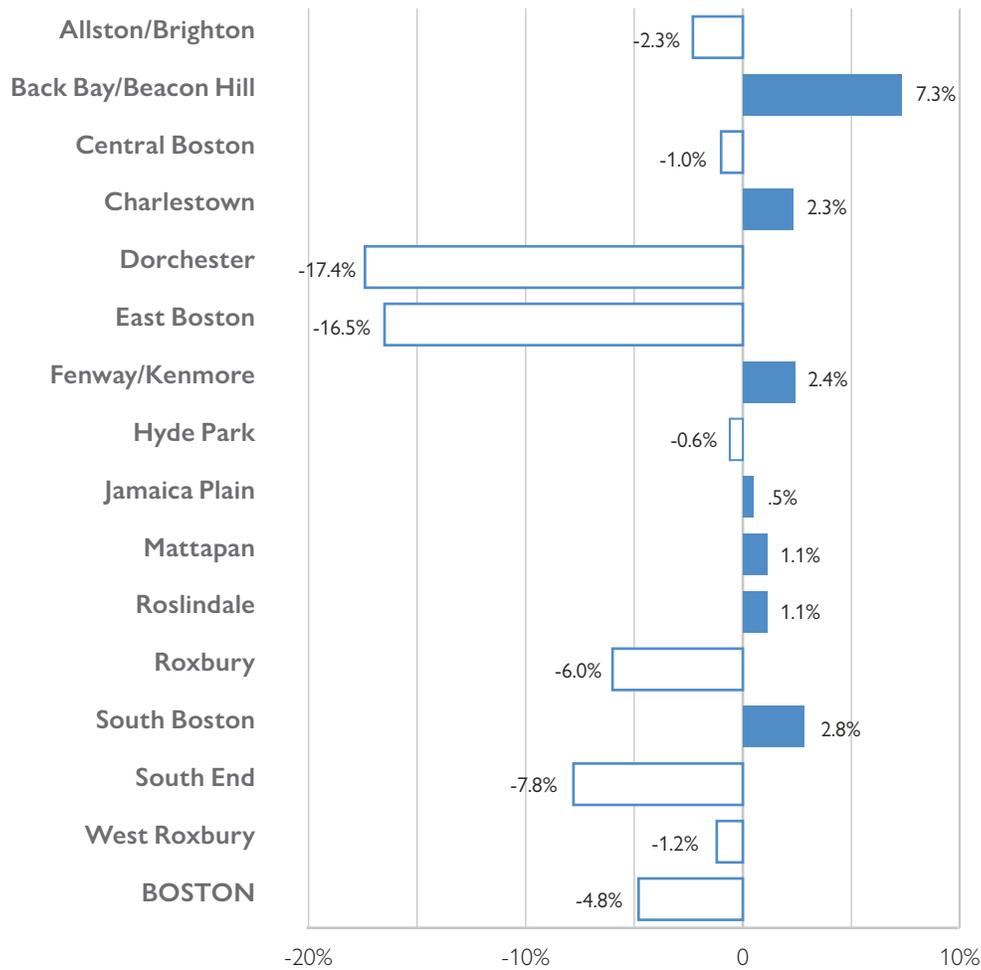
0–2 seats: Central Boston (10.5%), Charlestown (2.5%), Dorchester (8%), East Boston (10%), Fenway/Kenmore (5%), Hyde Park (12%), Mattapan (3%), Roslindale (6.5%) and Roxbury (6.5%) (see FIGURE 4). Conversely, the age group 3–5 years experienced a net loss of 5 percent between 2017 and March 2020, ranging from 1 percent in Central Boston, Hyde Park and West Roxbury to 16.5 percent in East Boston and 17 percent in Dorchester. Back Bay/Beacon Hill, Charlestown, Fenway/Kenmore, Jamaica Plain, Mattapan and South Boston had modest gains (see FIGURE 5).

FIGURE 4  
**Net Change in Seats for Children 0 - 2 Years of Age, by Neighborhood (Boston, Dec 2017 - Mar 2020)**



Source: MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

FIGURE 5  
**Net Change in Seats for Children 3 – 5 Years of Age, by Neighborhood  
 (Boston, Dec 2017 – Mar 2020)**



Source: MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

## Immediate COVID Impact (September 2020)

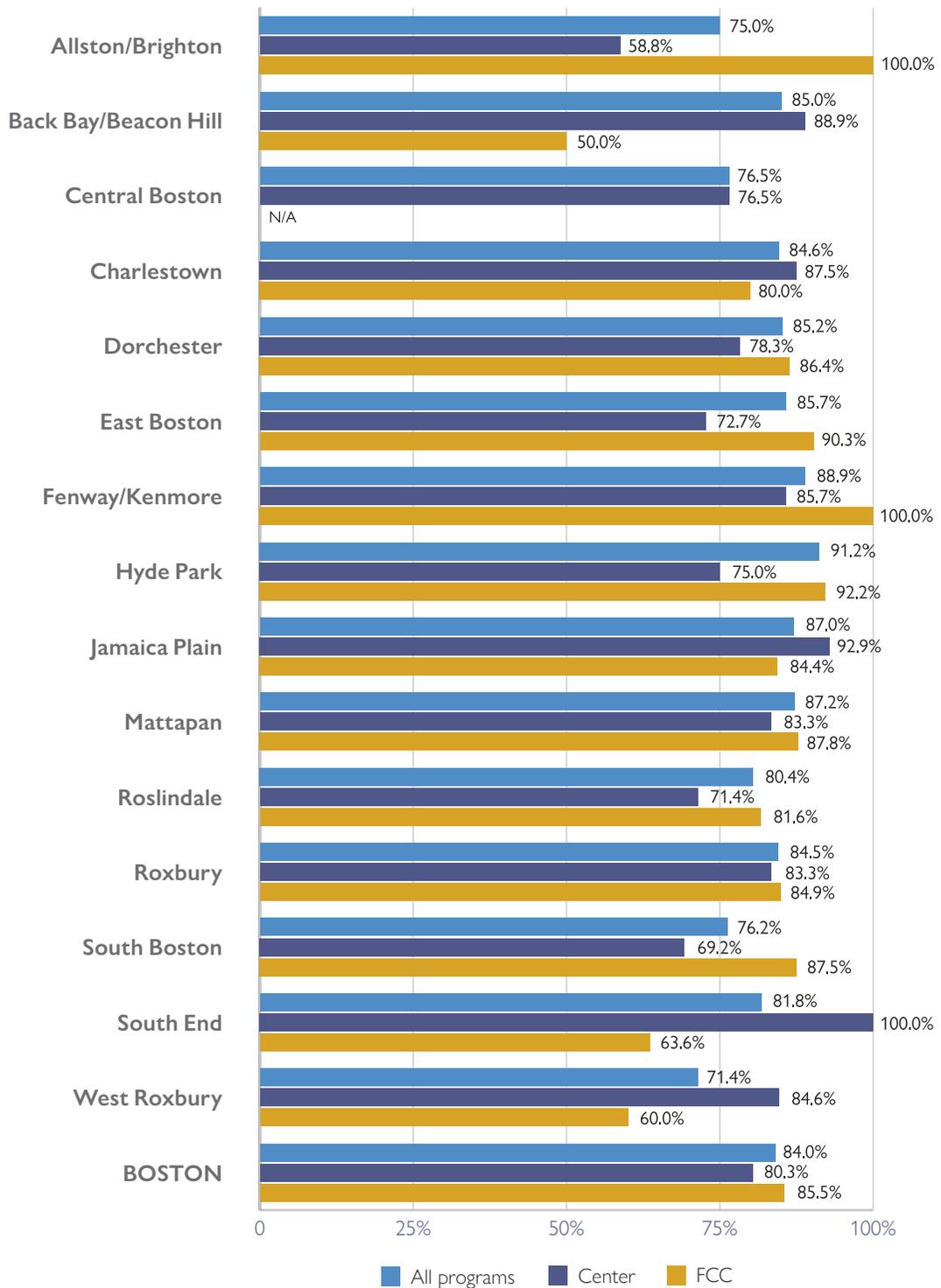
### AVAILABLE SUPPLY

After being closed for three months, EEC asked all child-care providers to indicate their intentions to reopen when the Governor lifted the emergency order closing all child-care programs. Of the 682 programs that had been operating in March, 84 percent (573) indicated they intended to reopen by September 14, 2020. The share of FCC programs was

slightly higher than that for center-based programs (85.5% and 80%, respectively). Several neighborhoods had lower rates of reopening compared to the city average for both types of programs (see **FIGURE 6**). Refer to **TABLE 3** at the Appendix for pre-COVID and immediate COVID impact data on the net change of child-care seats by neighborhoods and program type.

As mentioned above, the city had lost 3 percent of its seats for children 0–5 years of age between December 2017 and March 2020 (pre-COVID), with marked disparities across neighborhoods. We observed in September 2020 a compounded effect

FIGURE 6  
Share of Programs with an Intention to Reopen Date, by Neighborhood  
(Boston, Sep 2020)



Source: MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

FIGURE 7  
**Net Change in Number of Seats for Children 0 - 5 Years-Old  
 (Boston, Dec 2017 - Sep 2020)**



MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

of pre-COVID trends and the immediate impact of the COVID shutdown that occurred in March. Between December 2017 and September 2020, the loss at the city level was estimated at 16 percent. Once again, the city-level estimate masks disparities across neighborhoods.

East Boston, Dorchester, Hyde Park and Roxbury lost, respectively, 33.5 percent, 24 percent, 18 percent, and 17 percent in that period. The 2017–September 2020 net losses for Back Bay/ Beacon Hill (1.2%), Fenway/Kenmore and South End (7% each) were less than half of the average loss for the city. Allston/Brighton was gaining seats before COVID, but this neighborhood was the one that lost the highest

share of seats between March and September 2020 (35%), leading to a compounded loss of 32 percent in relation to 2017. See *Appendix, TABLE 2* for the full data on pre-COVID and immediate COVID percent losses for ages 0–5 years.

For the age group 0–2 years, the COVID shutdown led to losses in almost all neighborhoods, including two of five that had added seats between 2017 and March 2020.<sup>13</sup> Comparatively, all neighborhoods displayed a net loss on the number of seats for the age group 3–5 years in September 2020, including the ones that experienced modest gains pre-COVID. (See *Appendix, TABLE 4*.)

If all of these programs indeed had reopened in September and were operating at their full licensed capacity, they would have 13,424 seats available, which represents 86 percent of the 15,548 licensed seats available in March. However, center-based programs have been instructed by EEC and DPH to limit their enrollment for health and safety reasons based on square footage.<sup>14</sup> This means that utilized capacity in September was certainly lower than 86 percent of pre-COVID capacity. Child-care programs have been operating at thin margins even at full enrollment. The impact of reduced enrollment, as lately noted by several reports, surveys and news articles, may be devastating to providers—and families, once the pandemic is over and all families are comfortable sending their children to licensed child-care. Providers are and may continue closing their business for good now if there is no additional support to help keep them afloat.

### NEIGHBORHOOD CHARACTERISTICS ASSOCIATED WITH A PROGRAM'S LIKELIHOOD OF REOPENING

We looked at the association between the number of programs with an intent to reopen by September 2020 and the share of the following variables, by neighborhoods: poverty, female-led household, foreign-born children, White, Black, Latinx and Asian, data available through the ACS 2014–2018.<sup>15</sup> Although we had limited statistical power we did have a significant finding related to ethnicity. We found a significant association with the likelihood of reopening and the share of Latinx children. (See *Appendix, TABLE 5*.) Neighborhoods with a greater number of Latinx children had fewer programs reopening ( $r = -.7, p = .002$ ).<sup>16</sup> There are a few possible explanations for this finding. A recent survey in Massachusetts found that Latinx families had the biggest drop in utilizations of child-care compared to White and Black families.<sup>17</sup> Unemployment due to COVID is higher among women and Latinx families. Women make up 53 percent of continued unemployment claimants among Boston residents. Latinx people make up 26 percent of continued unemployment claimants despite being just 18 percent of Boston's adult population.<sup>18</sup> These factors would lead to less utilization of licensed care, at least in the short term.

## Neighborhoods with a greater number of Latinx children had fewer programs with a declared intention to reopen.

### PROGRAM CHARACTERISTICS THAT PREDICTED LIKELIHOOD OF REOPENING.

Using EEC data, we looked at characteristics of programs open at the beginning of March 2020 and their association with likelihood of reopening. These characteristics were: program type, size of program, funding model (number of federal child-care subsidies), location (neighborhood), and Emergency Child-Care Program status. The last two were not associated with likelihood of reopening. We found that FCC (compared to center-based), programs that accepted subsidies in March, and medium/large centers (compared to smaller ones) were more likely to reopen by September 2020. (See *Appendix, TABLE 6*.) A nationwide study has also identified that FCC providers were more likely to reopen compared to centers.<sup>19</sup>

Finally, we looked at all characteristics that were associated with reopening to identify which ones would more strongly predict it. Our analysis confirmed anecdotal evidence that programs with more subsidies were more likely to reopen by September 2020. Compared to programs with fewer than four children on subsidies, programs with four to 10 children were three times more likely to reopen and programs with more than 10 children on subsidies were four times more likely to reopen. (See *Appendix, TABLE 7*.)

### DEMAND, PARENT PREFERENCE AND UTILIZATION

Child-care is a labor-intensive industry: At the youngest ages, one adult can only care for at most three or four children.<sup>20</sup> This makes child-care expensive to supply, and many families are unable to pay the high cost of quality child-care. As a result, the market provides less child-care than would be socially optimal given society's strong interest in ensuring

## When asked about their ideal child-care arrangement, 75 percent chose center-based care,

that children are well cared for and that parents have the opportunity to work outside the home. Given that, to speak of *supply and demand* to characterize the child-care market is a misnomer. The allusion to market forces implies increased demand will lead to increased supply. Yet, at the pre-pandemic level, we saw that 35 percent of children in Boston aged five and under would not have access to licensed child-care if desired by their families.<sup>21</sup> Even more stark, the supply gap for 0–2-year-olds is as high as 93 percent in multiple Boston neighborhoods (2019). Surveys suggest that many of the parents of these children would seek licensed child-care for their children if the cost were lower.

The pandemic's unfortunate disruption to Boston families, the workforce and providers has revealed factors influencing shifts in demand for child-care in Boston. Demand, utilization and parent preference are equally important for understanding the health and vitality of the early education and care ecosystem. In this brief, we try to build a deeper understanding of demand by focusing on parent choice and preference based on the results of surveys and in-depth research methods. The work of our partners to understand these preferences provides insights into parents' choices before and during COVID.

Strategies for Children conducted a statewide family survey during the early stages of the COVID pandemic.<sup>22</sup> The findings of the Greater Boston<sup>23</sup> sample reflected families' plans across the state.<sup>24</sup> Seventy-five percent, or 559 respondents, had two full-time working parents. Of these respondents, 97 percent were private paying families. Nearly 89 percent of families used center-based care and 9.5 percent of families used family-based care; 3.3% used public schools. At the beginning of the pandemic, the majority (67%) of families planned to return to their previous provider while 29 percent indicated they were unsure. When asked about their ideal child-care arrangement, 75 percent chose center-based care, 10 percent chose schools and 7.5 percent chose family child-care. The remaining families indicated they preferred informal care arrangements with caregivers other than parents.

As a follow-up, Strategies for Children worked with Beacon Research on a state-wide survey to understand parent behaviors and preferences in the midst of the COVID-19 pandemic (August 2020). Of the 599 total families surveyed, 64 percent were working from home or mostly working from home. Twelve percent of these families depend on subsidies, whereas 82 percent were private pay families. Fewer families anticipate utilizing child-care now, compared with before the pandemic (76% prior to COVID, 62% in August 2020). The main factor driving the change is concerns about safety due to the virus, with 82 percent of responding families saying that minimizing exposure to the virus was a factor. Finally, 32 percent of respondents reported that their preferred provider has either not reopened yet or has closed permanently. Of the total sample, 12 percent were from Boston.

These surveys have limitations, including the higher response rates of private pay families. However, we gleaned additional information on parent choice and preference from focus groups of parents conducted by the City of Boston in the summer of 2020.<sup>25</sup> Twenty-four parents/caregivers from different racial, economic and employment backgrounds participated in the study.<sup>26</sup> The researchers identified that the so called "two Bostons"<sup>27</sup> had different child-care challenges, yet overlapping concerns. Independent of income, families are worried and scared, feel greater stress in balancing work and child-care and feel limited in all ways. As identified in the quantitative surveys described above, families are changing their preference because of COVID-19.

### A NOTE ON UTILIZATION (ENROLLMENT AND ATTENDANCE).

Data from the City of Boston (COB) and Boston Children's Hospital (BCH) give a snapshot of the issue of enrollment in the city. Both COB and BCH offered grant funding for child-care providers to support their reopening plans and long-term business viability.<sup>28</sup> Over the summer of 2020, they heard from around 300 applicants that needed money to pay for personal protective equipment, adjust their physical space

## Best Data Available on Enrollment in Boston FCC Programs

Pre-COVID:

86% of licensed capacity (BCH, 2020)

August–October 2020:

59.5% of licensed capacity (COB, 2020)

and/or hire an assistant to comply with the new EEC health and safety guidelines in order to reopen their programs. In surveying applicants, BCH found that among 164 programs with 10 or fewer children, before the COVID pandemic the average licensed capacity was 8.3 children, but the average enrollment was 7.1—or at 86 percent capacity. COB surveyed its grantees almost weekly between August and October 2020 regarding current enrollment numbers. A cohort of nearly 50 FCC programs, with 10 or fewer children, reported an average enrollment of 59.5 percent of licensed capacity. A national survey with more than 5,000 child-care providers found that enrollment was down by 67 percent in July 2020 compared to pre-COVID.<sup>29</sup> Another national survey, for FCC providers, reported that enrollment had decreased by 79 percent in the same month compared to pre-COVID.<sup>30</sup>

### EMPLOYERS' ROLE

Access to child-care affects all of us, not only children, their families and providers. Parents/caregivers need access to high quality child-care to work consistently and be productive. Employers need a stable workforce to drive a strong economy and the COVID crisis has proved that child-care is essential for that.

The United Way of Massachusetts and Merrimack Valley and the Massachusetts Business Roundtable conducted employer surveys in the summer of 2020. Of the employers surveyed, working parents/guardians indicated concerns about health, followed by child-care (25%) and the reopening of schools (38%) as factors impacting employee work decisions. Eighty-seven percent of companies say they are concerned about how the lack of child-care availability effects employees' productivity while working remotely.<sup>31</sup> Employers are most concerned with family-related benefits focused on "flexible" work schedules to meet child-care and remote learning needs.<sup>32</sup> Although these

data indicate that some employers are trying to understand the challenges faced by their employees, family focus groups indicate that employers need to take action to adequately support families' current child-care needs. Parents/guardians fully or partially working from home shared that employers acknowledge a more stressful home life during COVID-19, yet employees feel under pressure to produce similar pre-COVID work output. The "other Boston," the one in which employers required employees to return to their work site, is experiencing stress around competing needs due to the separation between work and child-care arrangements.<sup>33</sup>

### CHILD-CARE COULD BECOME A FOLLOW-ON CRISIS

As the local and national data and survey responses indicate, child-care enrollment is down due to parents' concerns about safety during the pandemic. However, we anticipate, based on survey responses, that parents will return to child-care once the immediate threat of COVID-19 abates. These data are troubling for a number of reasons. The current reduction in enrollment will cause additional providers to close their doors. Given the number of parents and other caregivers who are keeping their children home due to concerns over COVID right now, this may not cause an immediate supply challenge. As a result, the coming shortage may not receive the priority attention that is needed from policymakers and funders. As COVID numbers eventually drop and families try to return to care, it is highly likely that the number of families seeking care will greatly outpace the supply. As indicated in the recommendation section of this report, immediate and sustained public and private investment in child-care is critical to avoid a further economic crisis.

## Child-Care Providers' Support of Families Is Vital to the State

**A**t its most basic, when child-care providers close, we lose an essential resource for economic development. In order for parents to work, their children must be cared for. And yet, COVID has demonstrated that the loss goes far beyond that economic equation. With child-care closures we lose an entire infrastructure that has proven itself to

be critical to the sectors of education, public health, social services, essential workers and the city's economy. The early child-care sector has rallied one of the most substantial responses to the COVID-19 pandemic, despite being on the verge of financial collapse. In Boston, child-care providers who chose to re-open at the height of the pandemic under the Exempt Emergency Care initiative supported a wide cross-section of Boston's central industries, including hospital and health center physicians and nurses, pharmacists, public transportation drivers, grocers, police officers and utility workers. Additionally, Emergency providers opened their doors to the most vulnerable children in our city; those who have been homeless and those under the protection of the Department of Children & Family Services. The City of Boston allocated nearly a million dollars from the Boston Resiliency Fund to support Emergency Child Care providers.

Beyond providing emergency care, Boston child-care providers rose to meet other needs of the families they serve. A recent U.S. Chambers of Commerce report highlights how child-care providers have become experts in remote learning and wraparound supports for families across all socioeconomic strata,<sup>34</sup> in addition to being essential for the U.S. workforce and economic recovery. In Boston, during the closures and continuing after re-opening, individual center and family child-care providers have reached out to families they serve with social and emotional learning support through at-home enrichment kits, circle time with children over Zoom, and phone calls to check on the well-being of parents.

As the pandemic has ebbed and flowed, and with it the uncertainty of families meeting their basic needs, child-care leaders have continuously worked with government and philanthropy to secure grants and donations to meet the shifting needs of families. Through generous contributions, local foundations and corporations have provided funds to close the gaps between the cost of emergency care and the state investment, provide training and technical assistance necessary to access government loans and implement health guidelines, provide PPE and fund the provision of diapers, food and other basic necessities. The following examples illustrate a small fraction of the work being done across Boston.

- The YMCA of Greater Boston has provided over 2.6 million meals and nearly 147,000 bags of groceries for children, families and seniors. In addition, they have distributed 100 arts and crafts kits, 50 fine motor development kits, more than 500 books, and cash cards.
- The East Boston Social Centers, serving one of the neighborhoods hardest hit by the pandemic, provided thousands of meals and bags of groceries, masks, educational materials, formula and diapers.
- When Boston restaurant Picco declared it would donate 1,000 meals, Smart from the Start coordinated with them to deliver 150 meals to families, as well as providing cash cards.
- Nurtury, a network of centers and family child-care, launched a Family Resource Program to meet the needs of its families. Through this program, Nurtury collected and distributed diapers, wipes, formula and food. Nurtury's board members and volunteers made masks for all children and staff. Additionally, Nurtury communicated regularly with families through phone calls and personal outreach to provide critical information, remote learning resources, emotional support, and to identify specific challenges of some of Boston's highest needs families.
- UPK provided 700 remote summer learning kits and curricular training on their implementation to UPK classrooms as well as kindergarten, first and second graders served by community-based programs. They provided parent workshops through Vital Village and allowed budget flexibility so that providers can meet needs as they emerge. At the start of the 2020-2021 school year, they provided an additional 540 learning kits for new students entering UPK classrooms.

As the pandemic has continued into the fall and schools have faced reopening challenges, child-care providers have expanded their reach and are now supporting school-aged children with remote learning in onsite pods. These remote learning pods have been an incredible resource for families but have brought new staffing and infrastructure challenges for providers and nonprofit partners. The data on these challenges is just emerging and will be explored in more detail in our next brief.

Child-care providers have also been critical to the state's public health response during the pandemic. With the advent of Emergency care and eventual re-openings, family child-care and center providers found themselves on the front lines of teaching disease prevention behaviors to very young children and their families as they worked to implement public health guidelines. Providers asked EEC for additional resources to support this work. EEC, in coordination with the Massachusetts Department of Public Health, created a toolkit in multiple languages for providers to share with families. Of the 550 emergency providers statewide, only nine centers had more than a single case.<sup>35</sup> The risk of COVID-19 in child-care has been minimal, due to the high fidelity of implementation by providers and by educating families on these behaviors. In a special Public Health Emergency COVID-19 Initiative edition of the journal *Pediatrics*, physicians have called for increasing health resources and support for protecting the health of children, families and educators, and for defining "Early Care and Education as Essential Critical Infrastructure,"<sup>36</sup> as the sector supports essential workers.

Despite all this, the sector has not received adequate funding and support, even during the pandemic. According to the Center for American Progress, the cost of providing child-care in the United States during the pandemic has risen by at least 47 percent due to increases in operational costs. This increase jumps to 70 percent for family child-care providers. Part of the increase in operational expenses is the cost of personal protective equipment and sanitation supplies, made worse by reducing program capacity to meet social distancing guidelines.<sup>37</sup> In Massachusetts, a Neighborhood Villages survey of providers with combined service to over 8,000 children, with the highest concentration of respondents representing Boston and the Greater Boston area, found programs have had to exhaust their financial reserves, increase tuition, reduce salaries and secure loans to continue serving their families.<sup>38</sup> Although 58 percent were able to secure Paycheck Protection Program loans, these loans did not cover all costs and did not replace lost savings. Critically, the thin revenue margins of child-care businesses mean savings that may have accrued over two decades or more were lost in two months. As the pandemic has drawn on, these trends have continued and only worsened the prospects of the survival of the early education and care sector.

## Connecting in Quarantine: the 9:30 Calls

During the first surge of COVID-19 in mid-March, Governor Baker closed down the Commonwealth. Health-care providers, transportation workers and grocers were considered essential workers. Early education and care providers were not. At that time, Strategies for Children (SFC) decided to hold a 30-minute call at 9:30 a.m. to listen to the early care field. Since then, the 9:30 Calls have become an institution, taking place nearly every weekday, joined by 65 to 95 people representing early education and care, K–12, college, career, philanthropy and business, and state and local government. Although SFC is based in Boston, the participants represent every region of the Commonwealth. Each call addresses a different challenge or topic, including inconsistent communication and policies regarding COVID-19, PPE, public health guidelines, education guidelines and funding challenges. A survey of participants indicated the 9:30 Calls have increased their professional communication and collaboration across sectors, between early care practitioners and policymakers, and across state regions. The 9:30 Calls have also served to influence policymaking, increase funding, increase data use and improve the implementation of policies, and increase advocacy for the early education and care sector. The simple idea of a short phone call has served to connect diverse stakeholders around shared values, build an inclusive community, and make real-world change for children, families and providers.

# METHODOLOGY

Data used for this brief came from the Department of Early Education and Care (EEC), Boston Public Health Commission, and 2014–2018 American Community Survey, analyzed by the Boston Planning and Development Agency. We also used data from two surveys sponsored by Strategies for Children. Finally, enrollment data mentioned here came from Boston Children’s Hospital and the City of Boston.

**TABLE 1** (Appendix) offers more information for the data utilized from each one of the sources.

Using EEC data, we describe “Pre-COVID trends” (December 2017–March 2020) on the supply of child-care programs and seats (spots available for children in a child-care program) for children 0–5 years old in Boston neighborhoods. Aiming to investigate the “immediate COVID impact” on the child-care sector, this brief also presents findings on estimated availability of child-care programs and seats in Boston by mid-September 2020—approximately two months after child-care programs were allowed to reopen after being closed for three months in the Commonwealth. The reopening analysis explored program type, neighborhood demographics, and payments that could help understand which programs that were open in March 2020 were more likely to reopen by September.

From our 2019 report *The State of Early Education and Care in Boston: Supply, Demand, Affordability and Quality*, which used 2017 data, we replicated the methodology for distribution of seats by age group and definition of Boston neighborhoods.<sup>39</sup> Unlike last year’s report, we did not include information on the number of seats in public and non-public schools given the current focus on the child-care industry. While we did include Head Start seats, we did not look at Head Start programs separately in our reopening analysis because, as federally funded programs, Head Start followed federal policies regarding remote learning and support during the in-person shutdown period.

We present descriptive statistics for the number of programs and seats in the city between December 2017 and September 2020, by program type (center-based care and family child-care), age groups (0–2 and 3–5 years of age) and 15 ZIP Code–defined neighborhoods. It is important to note that the number of programs or seats alone does not tell the full story. Knowing both the distribution of programs and seats may help policymakers in deciding to add more programs in a given neighborhood or expand the number of seats available in existing programs. Percent change of seats or programs pre-COVID (December 2017–March 2020) was computed as the  $(\# \text{ of Sep 20 seats/programs} - \# \text{ of Dec 17 seats/programs}) / \# \text{ of Dec 17 seats/programs} * 100$ . The same logic was used for the immediate COVID impact time period (March 2020–September 2020) and the compounded COVID impact (December 2017–September 2020).

We conducted statistical tests to investigate: 1) the relationship between neighborhood characteristics and the number of programs with an intention to reopen date, by neighborhood (Pearson Correlations); 2) the association between characteristics of programs open at the beginning of March 2020 and their likelihood of reopening in September 2020 (Chi-Square and Fisher’s exact test); and whether certain characteristics of programs open at the beginning of March 2020 predicted their reopening by September 2020 (Logistic regression). For the correlation analyses, we used the best data available to explore some characteristics of children 0–5 years that could be associated with the share of programs with the intention to reopen across the 15 ZIP Code–defined neighborhoods. The selected census variables were the ones available by census tract for children age 5 years or younger and of theoretical interest to explore equity issues. Although we looked at cumulative percent positive (of tested) COVID results by neighborhood, we are not including the results of our analysis due to limited statistical power. All analyses were conducted in Stata 15; significant differences are noted in the text and tables.

# BOA POLICY RECOMMENDATIONS

**R**eturning to the same pre-COVID child-care system is inconceivable. The Alliance for Early Success released its Build Stronger Child-Care Policy Roadmap in September 2020, which identified four key areas of work to create a stronger early childhood system nationwide. The Roadmap provides a useful framework to organize efforts aimed at achieving a better early education and care system for all.

1) **Advance the Early Care and Education Profession: Expand Provider Support Initiatives.**

FCC providers in Boston lack basic business skills. For example, while FCC providers have experience caring for children, many could not initially apply for PPP during the COVID shutdown because they did not have a business bank account. University of Massachusetts Boston, Massachusetts Shared Services, Children's Hospital Boston Child-Care Support Initiative and the City of Boston's Child-Care Entrepreneur Fund have stepped up to offer training as well as financial support and coaching. These initiatives need to continue and be expanded to serve the FCC and center-based providers that need them. Providers need learning opportunities that are linguistically accessible, flexible and offered throughout the year to increase their business stability and quality.

2) **Build a Better Child-Care Business Model: Modernize Data Systems.**

Child-care stakeholders need real-time data to make informed policy decisions. A strong data infrastructure, which is robust in K–12 settings, is lacking in the early childhood ecosystem. In early child-care, basic questions are difficult to answer on several fronts: enrollment and attendance, child-care deserts, workforce needs, etc. We need better data to know where public and private investment is necessary and to continue to monitor the successful implementation of child-care. EEC has taken several positive steps toward better data collection and reporting in 2020, including regularly surveying providers,

tracking closures and reopenings, and calculating system utilization by region. EEC should continue to advance its data systems and work to connect them to the K–12 infrastructure so that the entire education pipeline is visible and transparent for policy and funding decisions.

3) **Increase Access and Affordability for All Families: Expand State Investment in Child-Care.**

As demonstrated in the data, accepting subsidies was the strongest predictor of a Boston child-care program declaring its intention to reopen in September 2020. Expanding state investment not only meets the needs of providers, it also ensures affordable care for families. Only 7 percent of children under the age of 6 meet the federal income requirement to receive subsidies in Massachusetts. The Centers for American Progress, therefore, identified that our state needs to expand its investment to adequately cover the extreme high cost of child-care here for all low- and middle-income families. The positive impact is estimated to be substantial not only for children and families, but also for the state economy. Increased federal and state investment also preempts a secondary crisis that the collapse of the child-care industry would generate.

4) **Reform Child-Care Financing.**

a. Rethink investment in the provision of child-care for middle- and low-income families. EEC was able to provide two critical supports to child-care providers during the closure period. Subsidy payments to providers continued during the pandemic despite the child-care shutdown. In this instance, EEC was able to secure the future provision of care through what was essentially stabilization funding. It was an incredibly successful intervention. Compared to programs with fewer than four children on subsidies, programs with four to 10 such children were three times more likely to reopen and programs with more than 10 children

on subsidies were four times more likely to reopen. Additionally, Emergency Child-Care providers received payments for ensuring that emergency drop-in care was available to essential workers. Payments were made based on providing the opportunity for care and not on actual uptake. Massachusetts should build on these findings to rethink the way that the Commonwealth invests in the provision of child-care for middle- and low-income families.

- b. Businesses must take a more active role in understanding and supporting employees' child-care needs and building the public/private partnerships necessary to meet them. Data from multiple Massachusetts surveys show that work and child-care are intertwined. Businesses can do more to support their employees—it is an imperative for attracting and retaining talent. We recommend Boston-based businesses examine the data in this report as well as the recommendations in our first annual *State of Early Education and Care Report* published last year and review their HR policies to devise new ways they can support child-care. As noted in a recent speech to the Boston Chamber, “A lack of access to child-care is ‘holding our economy hostage...’. Child-care should be thought of as a public good like transportation infrastructure rather than as a personal choice for parents.”

As a final note, during the pandemic EEC and the Massachusetts Department of Public Health have worked together to streamline policy and practice recommendations. This partnership has equipped child-care providers with the information that they need to inform families and to keep children and staff safe and healthy. When parents have a concrete understanding of the risks and benefits of returning to child-care for their children and family, they can make informed decisions that are based on fact and not fear. We recommend that this critical partnership continue during and beyond the pandemic and that the infrastructure necessary for continuing this important work be created.

# APPENDIX

TABLE 1  
Data Sources Used in This Brief

Agency	Data Type
Boston Children's Hospital - The Boston Childcare Support Initiative (August 2020)	Information on applicants' pre-COVID licensed seats and enrollment numbers
Boston Public Health Commission (Research and Evaluation Office) - Source: Massachusetts Virtual Epidemiologic Network (Jan 1, 2020 to Sep 9, 2020, 9:38am)	Of tested, Cumulative percent positive (COVID-19) Neighborhood Data by 15 ZIP-code defined Neighborhood
City of Boston Childcare Entrepreneur Funds (CEF) - Attendance information (Spring 2020 Cohorts)	Attendance numbers for Family Childcare providers participating in the CEF online business workshops
Strategies for Children*	Family Perspective survey (families demographics, childcare use pre-COVID, childcare utilization in May and August 2020, childcare plans for fall 2020, ideal childcare arrangements)
Massachusetts Department of Early Education and Care (EEC), 2017 – 2020	Licensed providers (capacity, location, program type, acceptance of subsidies, intended reopening date) by ZIP-code
United Way of Massachusetts Bay and Merrimack Valley - June 2020 survey	Employers Perspective: impact of COVID on Childcare arrangements for employees
U.S. Census Bureau, 2014-2018 American Community Survey, Boston Planning and Development Agency Research Division Analysis	Children and Families demographics by ZIP-code** <ul style="list-style-type: none"> <li>• Race and Ethnicity, 0 – 4 year-olds (B01001)***</li> <li>• Family Type: Female Householder Families, 0 – 5 year-olds (B09002)</li> <li>• Poverty Status, 0 – 5 year-olds (B17001)</li> <li>• Nativity: Foreign Born Population, 0 – 4 year-olds (B05013)</li> </ul>

\* Strategies for Children. (2020). Family Perspective COVID-19 Survey, April 20-May 29, 2020. Available at [http://www.strategiesforchildren.org/COVID-19/COVID19\\_FamilySurvey.pdf](http://www.strategiesforchildren.org/COVID-19/COVID19_FamilySurvey.pdf). Accessed on: 10/25/2020. & Beacon Research. (2020). Massachusetts Parents Struggle to Balance Covid-Related Child Care Concerns with Labor Market Participation and Productivity. Strategies for Children. Available at: [http://www.strategiesforchildren.org/COVID-19/BR\\_ParentSurvey\\_SFCpressrelease.pdf](http://www.strategiesforchildren.org/COVID-19/BR_ParentSurvey_SFCpressrelease.pdf). Accessed on 9/29/2020.

\*\* Neighborhoods were created by the Boston Opportunity Agenda utilizing provided ZIP-Code information. See BOA 2019 report for methodological details.

\*\*\* Racial/ethnic subsets will not add to total. Non-white Hispanic children may be double-counted. Multiracial children and members of smaller racial/ethnic groups are not reported separately here.

TABLE 2  
**Pre-COVID & COVID Net Change in Number of Seats for Children 0 – 5 Years-Old  
 (Boston, 2017 – Sep 2020)**

Neighborhood	Pre-COVID (2017-Mar20)	COVID (Mar-Sep20)	COVID compounded (2017-Sep20)
Allston/Brighton	5.1%	-34.9%	-31.6%
Back Bay/Beacon Hill	10.6%	-10.7%	-1.2%
Central Boston	-5.3%	-4.1%	-9.3%
Charlestown	0.7%	-7.8%	-7.2%
Dorchester	-14.2%	-11.2%	-23.8%
East Boston	-15.2%	-21.5%	-33.5%
Fenway/Kenmore	-0.2%	-6.6%	-6.8%
Hyde Park	-4.1%	-14.0%	-17.6%
Jamaica Plain	1.9%	-15.1%	-13.5%
Mattapan	-0.3%	-5.3%	-5.6%
Roslindale	-1.1%	-14.9%	-15.8%
Roxbury	-6.2%	-11.3%	-16.8%
South Boston	22.4%	-26.9%	-10.6%
South End	-4.5%	-2.9%	-7.2%
West Roxbury	2.0%	-13.3%	-11.6%
<b>BOSTON</b>	<b>-2.8%</b>	<b>-13.7%</b>	<b>-16.1%</b>

Source: MA Department of Early Education and Care, December 2017 to September 2020 data.  
 Boston Opportunity Agenda Analysis, 2020.

TABLE 3  
**Pre-COVID & COVID Net Change in Number of Seats for Children 0 – 5 Years-Old  
 by Program type (Boston, Dec 2017 – Sep2020)**

Neighborhood	Centers			FCC		
	NET CHANGE		COMPOUNDED	NET CHANGE		COMPOUNDED
	Pre-COVID (2017-Mar20)	COVID (Mar-Sep20)	COVID (2017-Sep20)	Pre-COVID (2017-Mar20)	COVID (Mar-Sep20)	COVID (2017-Sep20)
Allston/Brighton	10.4%	-38.0%	-31.5%	-32.0%	0.0%	-32.0%
Back Bay/Beacon Hill	10.1%	-10.3%	-1.2%	100.0%	-50.0%	0.0%
Central Boston	-5.3%	-4.1%	-9.3%	N/A	N/A	N/A
Charlestown	3.0%	-7.3%	-4.5%	-27.7%	-17.6%	-40.4%
Dorchester	-13.9%	-11.4%	-23.7%	-14.5%	-10.9%	-23.8%
East Boston	-15.3%	-27.0%	-38.2%	-15.1%	-8.9%	-22.6%
Fenway/Kenmore	1.0%	-6.8%	-5.8%	-33.3%	0.0%	-33.3%
Hyde Park	9.0%	-26.1%	-19.4%	-9.2%	-8.5%	-16.8%
Jamaica Plain	7.0%	-15.6%	-9.7%	-11.3%	-13.8%	-23.5%
Mattapan	1.8%	-2.1%	-0.3%	-2.4%	-8.8%	-11.0%
Roslindale	9.6%	-13.0%	-4.6%	-10.4%	-17.0%	-25.7%
Roxbury	-2.7%	-10.8%	-13.2%	-16.0%	-13.0%	-27.0%
South Boston	26.9%	-28.1%	-8.8%	-17.6%	-10.7%	-26.5%
South End	-1.1%	0.0%	-1.1%	-26.7%	-28.6%	-47.6%
West Roxbury	9.3%	-7.8%	0.7%	-23.4%	-40.7%	-54.5%
<b>BOSTON</b>	<b>1.5%</b>	<b>-14.0%</b>	<b>-12.7%</b>	<b>-13.8%</b>	<b>-12.7%</b>	<b>-24.8%</b>

Source: MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

TABLE 4  
**Pre-COVID & COVID Net Change in Number of Seats  
 by Age Group - 0 - 2 & 3 - 5 Years-Old (Boston, Dec 2017 - Sep2020)**

Neighborhood	Seats 0 – 2 Years			Seats 3 – 5 Years		
	NET CHANGE		COMPOUNDED	NET CHANGE		COMPOUNDED
	Pre-COVID (2017-Mar20)	COVID (Mar-Sep20)	COVID (2017-Sep20)	Pre-COVID (2017-Mar20)	COVID (Mar-Sep20)	COVID (2017-Sep20)
Allston/Brighton	18.90%	-29.80%	-16.50%	-2.30%	-38.2%	-39.6%
Back Bay/Beacon Hill	15.00%	-11.20%	2.20%	7.30%	-10.3%	-3.7%
Central Boston	-10.50%	-3.80%	-13.90%	-1.00%	-4.4%	-5.3%
Charlestown	-2.50%	-7.30%	-9.70%	2.30%	-8.1%	-6.0%
Dorchester	-7.70%	-11.10%	-17.90%	-17.40%	-11.2%	-26.6%
East Boston	-9.70%	-4.50%	-13.70%	-16.50%	-25.8%	-38.1%
Fenway/Kenmore	-5.20%	-5.50%	-10.50%	2.40%	-7.1%	-4.9%
Hyde Park	-11.70%	-6.70%	-17.70%	-0.60%	-17.0%	-17.5%
Jamaica Plain	5.00%	-10.30%	-5.90%	0.50%	-17.4%	-17.0%
Mattapan	-2.90%	-12.70%	-15.20%	1.10%	-1.5%	-0.5%
Roslindale	-6.50%	-20.30%	-25.40%	1.10%	-13.0%	-12.0%
Roxbury	-6.50%	-11.80%	-17.60%	-6.00%	-11.1%	-16.5%
South Boston	51.20%	-21.70%	18.40%	2.80%	-32.2%	-30.3%
South End	1.70%	-2.60%	-0.90%	-7.80%	-3.0%	-10.6%
West Roxbury	10.60%	-7.70%	2.10%	-1.20%	-15.7%	-16.7%
<b>BOSTON</b>	<b>1.50%</b>	<b>-12.20%</b>	<b>-10.90%</b>	<b>-4.80%</b>	<b>-14.4%</b>	<b>-18.5%</b>

Source: MA Department of Early Education and Care, December 2017 to September 2020 data. Boston Opportunity Agenda Analysis, 2020.

TABLE 5  
Correlation Results

Demographics	Correlation (% lost seats 0 – 5)
Share of children living in poverty (0-4 year-olds)	-0.1
Share of children in Female-led Household (0-2 year-olds)	-0.2
Share of children in Female-led Household (3-5 year-olds)	-0.15
Foreign born children (0 – 4 year-olds)	-0.004
Share of White children (0 – 5 year-olds)	0.09
Share of Black children (0 – 5 year-olds)	0.08
Share of Latinx children (0 – 5 year-olds)	-0.72 (p=0.002)*
Share of Asian children (0 – 5 year-olds)	0.01

% lost seats 0 – 5 = (# of Sep 20 seats – # of Dec 17 seats)/# of Dec 17 seats \* 100

\* Significant at the 0.006 level (Bonferroni correction)

TABLE 6  
**Program Characteristics with Chi-Square Analyses  
to Examine Likelihood of Reopening. (N = 682)**

Characteristic	Statistical result	Likelihood to reopen by Sep 20 (Yes vs. No)
<b>Program type</b>		
Center-based vs. FCC	Centers: 78.8% (152 of 193)	FCC were slightly more likely to reopen
	FCCs: 85.1% (416 of 489)	
	[ $X^2(1, 682) = 3.96, p = .046$ ]	
<b>Acceptance of subsidies in March</b>		
Yes vs. No	Yes: 73.9% (420 of 568)	0.09
	No: 26.1% (148 of 568)	0.08
	[ $X^2(1, 682) = 59.81, p < .0001$ ]	-0.72 ( $p=0.002$ )*
<b>Number of seats</b>		
10 kids or less (FCC)	FCC: 85% (415 of 489)	Small centers (11 – 30 kids) were less likely to reopen compared to FCCs, medium and large Centers
11 – 30 (small centers)	Small Centers: 57.8% (15 of 26)	
31 – 100 (medium Centers)	Medium Centers: 80% (108 of 135)	
> 100 (large Centers)	Large Centers: 91% (30 of 33)	
	[Fisher's exact = .003]	

No association: Neighborhood, Being an Emergency Childcare Provider  
FCC = Family Childcare program

TABLE 7  
Likelihood to Reopen According to Number of Children on Subsidies.

Characteristic	Result
<b>Acceptance of subsidies in March</b>	
<b>Level 1</b> programs with < 4 children	Compared to Level 1:
<b>Level 2</b> programs with 4 to 6	Level 2 programs - 3 times more likely to reopen (OR = 3.27, 95% CI: 1.37-7.81, p=.008)
<b>Level 3</b> programs with 7 to 10	Level 3 programs - also 3 times more likely to reopen (OR = 3.4, 95% CI: 1.24-9.46, p=.018)
<b>Level 4</b> programs with > 10	Level 4 programs - 4 times more likely to reopen (OR = 4.16, 95% CI: 1.17-14.9, p=.036)

Note: Logistic Regression Analysis was performed controlling for number of seats. Full results available upon request.

# ENDNOTES

1. After entering the term *childcare crisis in America* (without quotations) on the main Google search page (google.com), we used the Tools button to Customize the date range. For the first search, we left the “From” field blank and added “3/1/2020” in the “To” field. For the second search, we changed the “To” field to “10/15/2020”.
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11. Neighborhoods without an UPK classroom in 2019: Allston/Brighton, Mattapan, South End. Data provided by the Boston Public Schools. Notice that BPS defines neighborhoods differently from the definition used in this brief.
12. Central Boston had no FCC between December 2017 – September 2020.
13. The five neighborhoods that experienced gain in number of seats for children 0 – 2 years of age pre-COVID (2017 – March 2020) were Allston/Brighton, Back Bay/Beacon Hill, Jamaica Plain, South Boston and West Roxbury. Only Back Bay/Beacon Hill, South Boston and West Roxbury were able to maintain a net gain of seats in September 2020, despite having lost seats during the COVID shutdown.

14. Massachusetts Department of Early Education and Care. (2020). *COVID-19 Child Care Playbook – Implementing the Minimum Requirements for Health and Safety*. Available at: <https://eelead.force.com/resource/1598635047000/ChildCarePlaybook> . Accessed on 9/5/2020.
15. U.S. Census Bureau, 2014-2018 American Community Survey, BPDA Research Division Analysis.
16. We used Pearson correlations to explore the association between families/neighborhood's demographic, health characteristics and the number of programs reporting a reopening date by September 2020. The p-value to consider an association significant was corrected for multiple comparisons using the Bonferroni method. (p-value = .05/6 comparisons = .008) Only values smaller than .008 would be considered significant.
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