OIAA Research Brief: Examining ECEAP Enrollment Trends During COVID-19 Pandemic

Background and Purpose

COVID-19 began impacting day-to-day life in Washington state in March 2020.[1] This led to child care closures, delayed starts, and moves to modified (remote) service delivery across the state. In most cases, Early Childhood Education and Assistance Program (ECEAP) providers managed to stay open or offer modified services for enrolled children and families. However, ECEAP saw a drop in total enrollment at the beginning of the pandemic in March 2020. This raised questions about possible barriers providers may have faced in remaining engaged with families during this unprecedented health and economic crisis.

This brief seeks to provide information about the ECEAP enrollment drops observed in the first months (or years) of the pandemic. It showcases re-engagement strategies with families in the post-pandemic period to help understand the extent to which existing engagement strategies may have helped to mitigate ECEAP enrollment drops. This is accomplished by addressing four main questions:

1. How did quarterly enrollment counts change in the months/years following the onset of the pandemic relative to enrollment trends in years past?
2. How were enrollment drops distributed across contractors?
3. To what degree were enrollment drops associated with demographic characteristics of individual children and families?
4. To what extent did ECEAP family engagement practices (i.e., Mobility Mentoring) help to limit enrollment drops?

Data

This analysis is based on three consecutive years of data from the child-level Enrollment Report in the Early Learning Management System (ELMS) (academic years 2018-19, 2019-20, 2020-21). For each of the three data sets, duplicate child records were combined to create the child's first and last dates of enrollment.[2] From children's first and last dates of enrollment, it is then possible to estimate total enrollment counts by academic quarter.[3] From this frame we can

[1] Consider adding link to forthcoming FSKA report, which has a section at the beginning about the impact of COVID on early learning in the state.
[2] Child records are duplicated for children who have exited and then re-enrolled in ECEAP.
[3] This analysis establishes academic quarters as follows: Q1 Sept. 1 – Nov. 30, Q2 Dec. 1 – Feb. 28, Q3 March 1 – May 31, Q4 June 1 – Aug. 31.

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then determine if the composition of those enrolled varied by contractor or demographic characteristics of individuals.

Additionally, the analysis for question 4 above incorporates additional data from the Mobility Mentoring child-level report in ELMS, as well as various priority point indicators of family health and well-being. For this analysis, participation in Mobility Mentoring is defined by parents' completion of the family assessment pre-response at any point in the academic year.

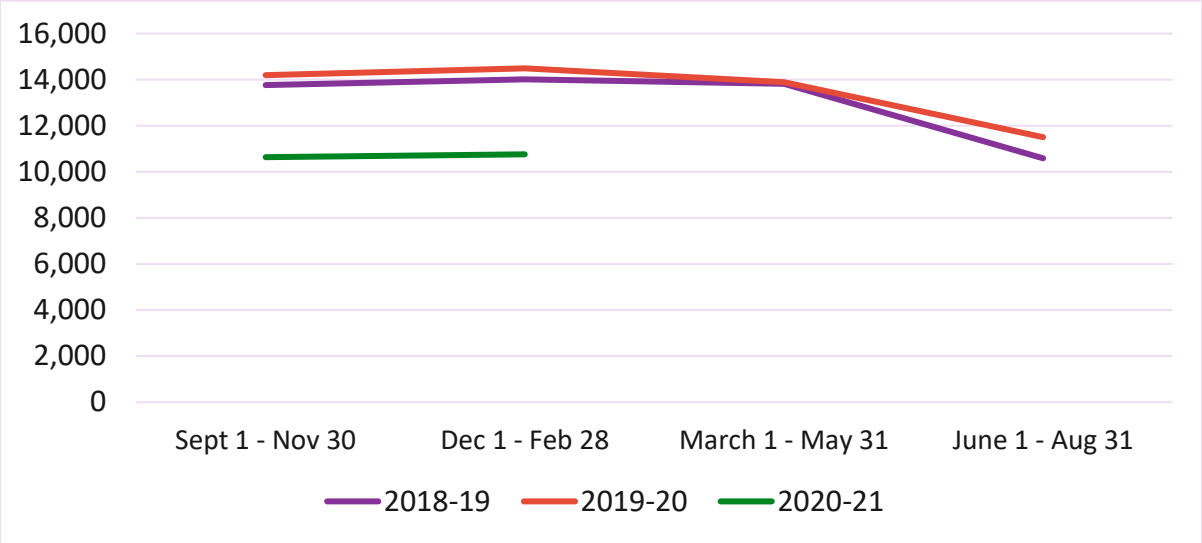
Findings

Question 1: How did quarterly enrollment counts change in the months/years following the onset of the pandemic relative to enrollment trends in years past?

Figure 1 shows that quarterly enrollment counts were largely unchanged in 2019-20 relative to the prior year. It was not until fall 2020 that ECEAP began to see a sizeable decrease in quarterly enrollment—a decrease of 3,555 children when compared to fall 2019.

Note that some classrooms start later than others in any given ECEAP school year, either by design or because they have been delayed for some reason. For example, in 2019-20, about 1% of classrooms (n=12) had a start date that was later than November 30. These classrooms accounted for 128 of ECEAP's 13,853 funded slots. By comparison, in 2020-21, about 4% of classrooms (n=42) had a start date that was later than November 30. These classrooms accounted for 482 of ECEAP's 14,320 funded slots for that year. Thus, late classroom starts could account for a little over a tenth of the total drop-off of 3,555 children occurring in fall 2020.

Figure 1. ECEAP Yearly Enrollment Counts, by Quarter



Question 2: How were enrollment drops distributed across contractors?

Next, we examine how this enrollment drop was distributed across contractors. Contractor enrollment drops can be interpreted using the ratio pictured below. This ratio is further illustrated in Table 1 using hypothetical enrollment counts. Note how ratios over 1.00 indicate less enrollment drop, while ratios under 1.00 indicate greater enrollment drops.

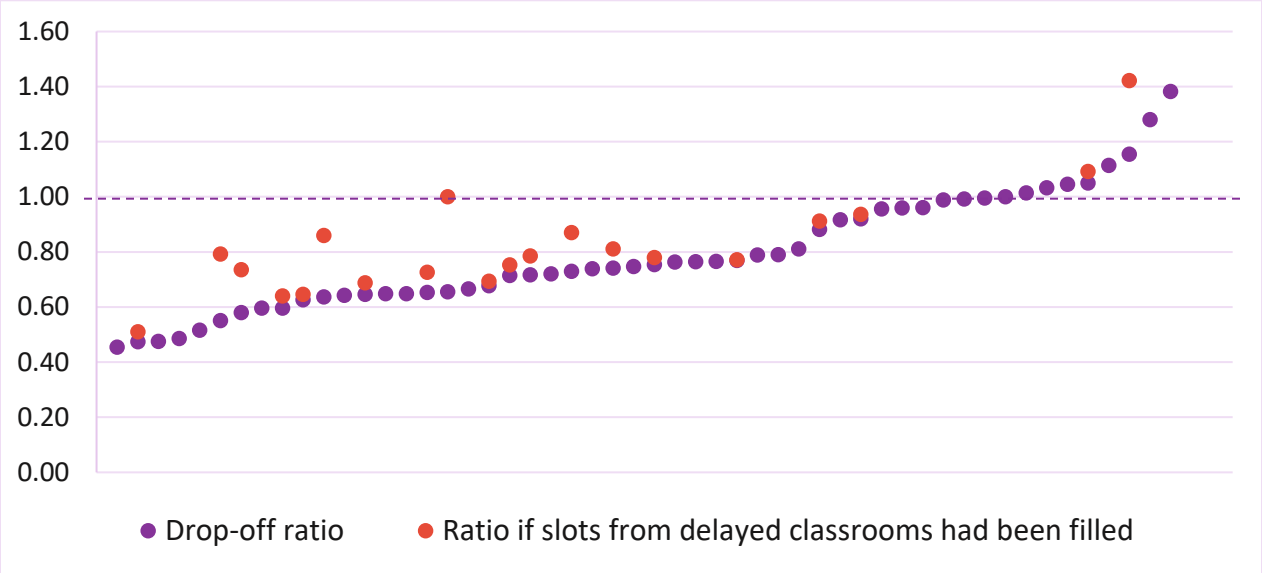
$$\text{Contractor drop ratio} = \frac{\text{Fall 2020 enrollment count}}{\text{Average of Fall 2018 and Fall 2019 enrollment counts}}$$

Table 1. Illustration of Contractor Enrollment Drop Ratio Using Hypothetical Enrollment Counts

	Fall Enrollment Counts			Enrollment
Contractor	2018	2019	2020	Drop Ratio
Contractor 1	56	62	70	1.19
Contractor 2	213	223	217	1.00
Contractor 3	161	179	148	0.87
Contractor 4	15	22	12	0.65

Figure 2 displays the enrollment drop ratio for each ECEAP contractor, excluding those for whom three years of data was not available. Purple dots indicate the actual enrollment drop ratio. The red dots address the fact that some contractor classrooms had delayed starts, so these points indicate where the enrollment drop ratio would be if those classrooms had not been delayed and all their funded slots had been filled. Overall, this figure reveals that there was wide variation in the fall 2020[4] enrollment drop among contractors. The average actual enrollment drop ratio across all contractors was 0.83.

Figure 2. Fall 2020 Contractor Enrollment Drop Ratios



*Dashed line indicates no change in enrollment counts relative to the average counts of the prior two years.

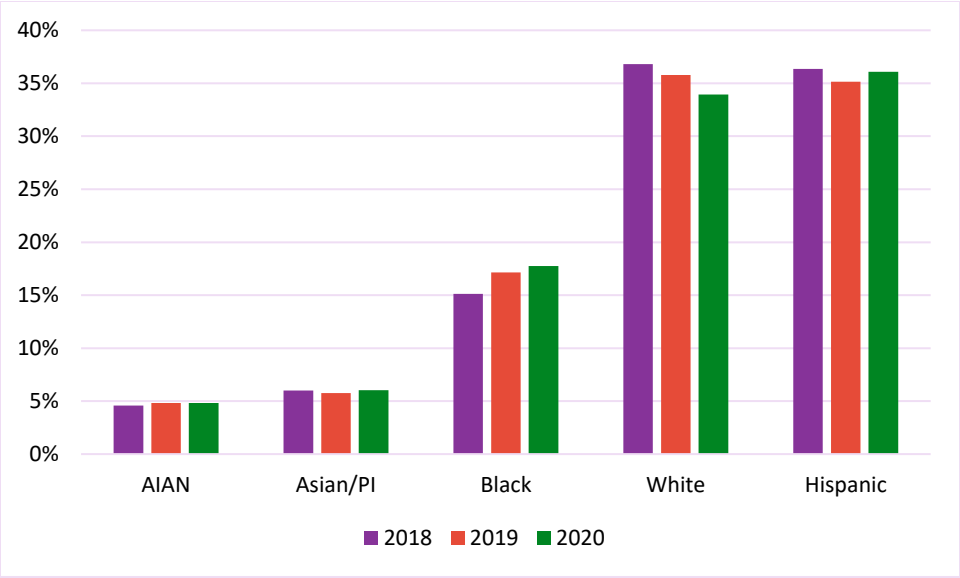
Question 3: To what degree were enrollment drops associated with demographic characteristics of individual children and families?

Next, we examine whether the demographic composition of children enrolled in fall 2020 changed relative to the prior two years. Figure 3 shows that the percentage of each

[4] For this portion of the analysis "fall" enrollment totals included children who had enrolled as early as July 1 and as late as November 30.

racial/ethnic group stayed relatively consistent over the three-year period with a slight increase in the percentage of Black children and a slight decrease in the percentage of white children.

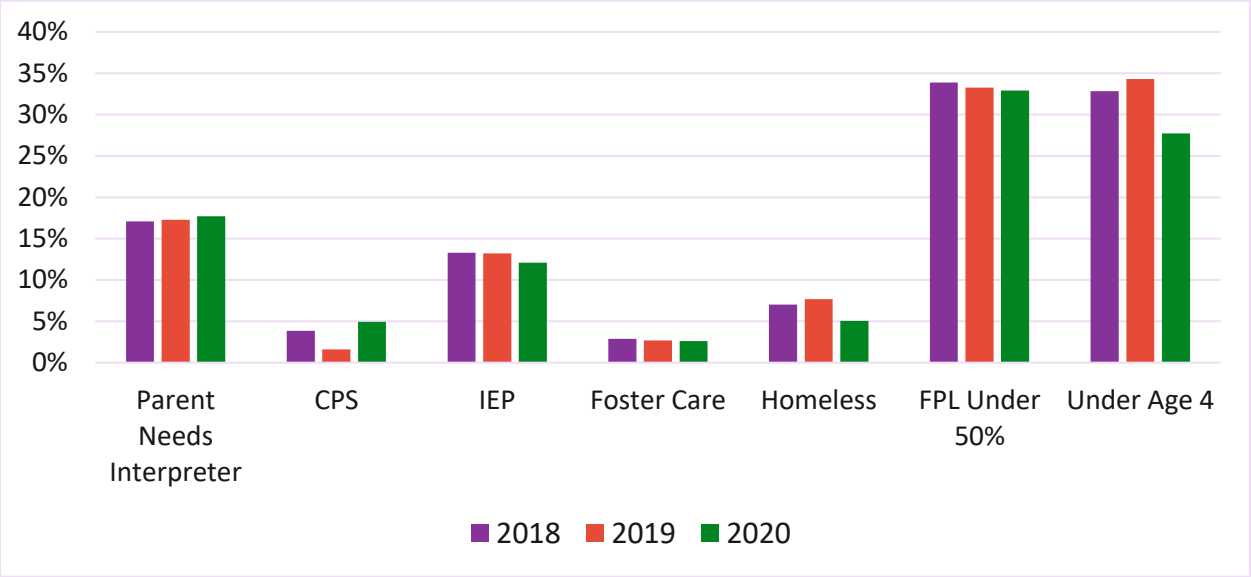
Figure 3. Fall Enrollment by Racial/Ethnic Subgroup



Note: Race/ethnic categories are based on WSRDAC/M standards. For Figure 3 above, AIAN and AIAN-Multi percentages have been combined into a single group "AIAN." Similarly, Black and Black-Multi percentages have been combined into the "Black" category. The Multi-Other category has been omitted due to its small sample size.

Figure 4 shows the degree to which certain subgroups of children were over- or under-represented in fall 2020 relative to the previous two years. Subgroups were pulled from the Enrollment Report in ELMS and are a sample of characteristics that could potentially be associated with the likelihood of enrollment. Results show that the percentage of each subgroup stayed relatively stable over the three-year period with a slight decrease in the percentage of children who were homeless and a moderate decrease in the percentage of children who were under the age of four at the time of their enrollment. Also notable is the slight increase in the percentage of children who were involved in Child Protective Services (CPS) from 2019 to 2020.

Figure 4. Fall Enrollment by Demographic Subgroup



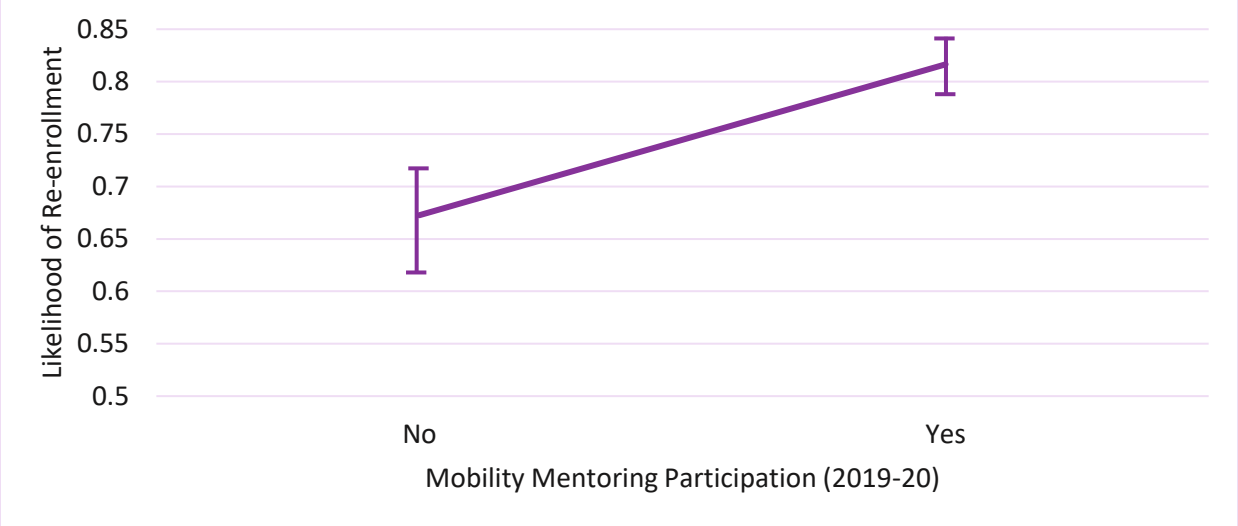
Question 4: To what extent did ECEAP family engagement practices (i.e., Mobility Mentoring) help to limit enrollment drops?

In the final portion of this analysis, we test the extent to which families' participation in Mobility Mentoring (MM) played a role in mitigating some portion of the enrollment drops that occurred in fall 2020. One way to test this is to look at the association between MM participation and the likelihood that children who were enrolled in ECEAP during the 2019-20 academic year as three-year-olds would re-enroll the following fall as four-year-olds.

For this analysis, participation in Mobility Mentoring is defined by parents' completion of the family assessment pre-response at any point during the 2019-20 academic year. These families are compared to those who did not participate in MM in any capacity. A small number of families, families who participated in MM but did not complete the pre-assessment, were excluded from this analysis. Finally, the outcome of "re-enrollment" includes children who enrolled in their second year of ECEAP at any point between July 2020 and March 2021.

Results indicate that MM participation during the 2019-20 academic year is associated with an 82% likelihood of re-enrollment in fall 2020 compared to a 67% likelihood for the non-MM group.[5]

Figure 5. Adjusted Predictions of MM Participation on Likelihood of Re-enrollment (with 95% CIs)



Key Takeaways

- Enrollment trends stayed relatively stable in the months following the onset of the pandemic in March 2020. It was not until the fall of the following academic year that substantial drops in enrollment counts began to occur.

[5] While not detailed in this brief, a supplemental inferential analysis (available upon request) was able to determine that the difference between these two groups was significant. It was necessary to understand the extent to which this difference was attributable to MM involvement *itself* versus other factors that may be correlated with MM involvement but not directly measured. To accomplish this, the researcher used a mixed-effects logistic regression to control for a range of child, family, and program characteristics. Additionally, the model adjusted for contractor and site-level membership to account for unobserved similarities among children within the same programmatic settings. By controlling for observable effects attributable to individual and program characteristics, the researcher was able to isolate the potential impact of MM on likelihood of re-enrollment. It should be noted, however, that families who choose to participate in MM may already be more likely to re-enroll. This is called selection bias, and while we can address it to some extent using control variables available to us in the data, this does not eliminate the possibility that unobserved characteristics that are present in individuals prior to participation in MM are driving these results.

- The degree of enrollment drop-off that occurred in fall 2020 appears to vary widely across contractors. Some were not affected at all, while others were affected significantly.
- Enrollment drops that occurred in fall 2020 did not appear to disproportionately impact any one racial/ethnic or demographic subgroup, at least not to a large extent.
- There is some evidence to suggest that family engagement strategies (i.e., MM) may have helped to mitigate the degree of enrollment drops that occurred across ECEAP in fall 2020.