

**Maryland Enhanced Child Care
Support and Teacher Retention Award
(ECSTRA) and Workforce Survey**
Implementation Report
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**Learning About the ECSTRA Program Rollout:
Outreach, Program Clarity, and Participant Understanding**

Teresa Lansford, Allison Atteberry, Justin B. Doromal

EdPolicyWorks Center,

University of Virginia

Learning About the ECSTRA Program Rollout: Outreach, Program Clarity, and Participant Understanding

Key Takeaways

- A research team at the University of Virginia (UVA) conducted a randomized control trial (RCT) study of an innovative retention bonus program called [Enhanced Childcare Support and Teacher Retention Award \(ECSTRA\)](#). It was piloted by the Maryland State Department of Education (MSDE) October 2023 through June 2024, to reduce childcare site turnover.
- A research team also conducted an August 2024 Follow-Up Survey to help MSDE understand how ECSTRA RCT participants learned about, understood, and felt about the program overall (67% of ECSTRA RCT participants responded).
- ECSTRA RCT participants most commonly learned about ECSTRA from their employer or MSDE's website. Their employers were largely informed by MSDE's "Tuesday Tidbits."
- Around 90% of ECSTRA respondents felt the program components were clear.
- Of those offered a retention bonus, 86% accurately recalled their assigned bonus amount.
- The most common theme in written feedback—accounting for 32% of all responses—was appreciation for the ECSTRA Program. Many described how the bonus made a meaningful difference in their lives and expressed feeling more valued and motivated to stay.
- Other comments provided constructive suggestions—most commonly around improving payment distributions (29%), the pilot program's design (21%), and communication (13%).

This report is part of a series that, combined, aims to study the early educator workforce in Maryland and how retention bonuses from the Enhanced Childcare Support and Teacher Retention Award (ECSTRA) Program may have influenced turnover. **The purpose of this report is to document the rollout of the ECSTRA Program and participants' experiences, based on responses to an August 2024 Follow-Up Survey.** This information may help inform future program design improvements.

This brief will answer the following questions: ([Q1](#)) How Did ECSTRA RCT Study Participants Learn About the Program? ([Q2](#)) What MSDE-Provided Resources Did ECSTRA RCT Participants Use to Learn About the Program's Structure? ([Q3](#)) How Clear Were the Features of the ECSTRA Program? ([Q4](#)) Did Those Receiving Bonuses Understand Their Bonus Offer? ([Q5](#)) Were ECSTRA Bonus Recipients Aware They Received Their Bonus? ([Q6](#)) What Feedback Did the ECSTRA RCT Participants Share with MSDE and the UVA Research Team?

Background

What is the ECSTRA Program?

A stable early-educator base is important for creating positive early childhood experiences for children, but turnover continues to be a persistent problem in early childhood education (ECE), partly due to early childcare and education being one of the lowest-paid industries nationally (Totenhagen et al., 2016; Cooksey & Thomas, 2024). Some states have begun to address the issue of turnover in ECE related to employee compensation through retention bonus programs. However, these incentive programs represent a relatively new approach to addressing retention. There is still much to learn about the design of ECE retention bonus programs to maximize their impact. In 2023, the Maryland State Department of Education (MSDE) piloted the [ECSTRA Program](#)¹ as a potential policy strategy to help stabilize its ECE workforce. ECSTRA directed American Rescue Plan Act (ARPA) funds directly to eligible early educators who remained in their same childcare site and role for up to an 8-month period via retention bonuses. The program tested \$1000, \$2000, or \$3000 retention bonus offers to address turnover, rewarding those who stayed at their licensed childcare site for up to 8 months.²

UVA Study of the ECSTRA Program

A UVA-based research team conducted a study to evaluate the results of the ECSTRA Program and document the program's implementation. To accommodate financial constraints, given the limited ARPA funding, ECSTRA used a lottery-based approach to fairly allocate the limited opportunities to participate in the program and at each bonus level.³ As a result, the lottery allowed the research team to leverage a randomized controlled trial (RCT) design to study ECSTRA's causal impact on turnover. To be offered a bonus, those in a \$1000, \$2000, or \$3000 treatment group had to remain in an eligible role at their same licensed childcare site from the start of the ECSTRA Program (October 2023) for at least 5 months to receive the first half of the bonus, and at least 8 months to receive the second half of the bonus. To evaluate the implementation and rollout of the ECSTRA Program, the research team administered an online Follow-Up Survey in August 2024—about two months after ECSTRA ended. For additional detail on that survey, see UVA's [Follow-Up Survey Implementation Report](#).

¹ For complete details, see [ECSTRA Program Information Guide](#) and [ECSTRA Program Frequently Asked Questions](#).

² For additional information about the structure of the ECSTRA Program and its causal effects, see [The Impacts of Maryland's Enhanced Childcare Support and Teacher Retention Award \(ECSTRA\) Bonus Program](#).

³ From the pool of eligible applicants (N=5,446), approximately 75% were randomly selected to receive a retention bonus offer of either \$1000, \$2000, or \$3000 (about 25% in each payment group). The randomization occurred at the site-level to ensure applicants from the same site were all randomized to the same bonus tier (rather than colleagues working at the same site or even the same classroom being offered different bonus amounts). For additional detail about the randomization, see UVA's [full report on the MSDE study](#). These participants were considered the "treatment" group, while the remaining 25% that were randomly assigned not to receive a bonus formed the "control," or comparison, group. This control group is essential because it serves as the key point of comparison for understanding whether, and by how much, the ECSTRA bonus offers reduce turnover. Because randomization solely determined treatment status, there are no differences in the baseline characteristics of early educators across groups other than their ECSTRA bonus offer.

From Whom Did We Collect Feedback About the ECSTRA Program?

The Follow-Up Survey was sent to 5,371 ECSTRA RCT study participants, including both the control group (the 25% who were randomly selected to not receive a bonus offer) and the treatment group (the 75% who were randomly selected to receive retention bonus offers). One goal was to gather their perspectives on specific aspects of the program.⁴ Overall, 67% of ECSTRA RCT participants responded (3,605 of 5,371) to the August 2024 Follow-Up Survey.

Since not all ECSTRA RCT participants completed the Follow-Up Survey, it is first important to consider the extent to which survey findings represent the experiences of all ECSTRA RCT participants. Fortunately, a comparison of demographic and site-level characteristics shows that the full ECSTRA RCT population closely resembles the 67% subset who responded to the Follow-Up Survey (see [Appendix A](#) for the complete comparison). [Appendix B](#) further confirms that each of the three bonus offer groups (\$1000, \$2000, and \$3000) is well-represented among respondents.⁵ This similarity increases confidence that the Follow-Up Survey findings closely reflect what we might have observed if all ECSTRA RCT participants had responded. Therefore, for the remainder of this report, survey results from “ECSTRA RCT participants” implicitly refer to those who were in the RCT study *and* completed the Follow-Up Survey.

What Did the Follow-Up Survey Ask About the ECSTRA Program?

The Follow-Up Survey asked participants how they learned about the ECSTRA Program, about the clarity of the program’s features, and their understanding of their own retention bonus outcomes.⁶ Additionally, the survey provided an opportunity for general feedback via open responses. Understanding how participants learned about the ECSTRA Program, how well they grasped its features, and what feedback they offered provides critical insight into the clarity, reach, and effectiveness of MSDE’s rollout of the ECSTRA Program. These findings can help MSDE—and other states—refine communication strategies, improve implementation logistics, and strengthen participant engagement in future initiatives. For a complete description of how the Follow-Up Survey branched (i.e., differed) based on participants’ bonus status, and the exact wording of survey questions, see [Appendix C](#).

⁴ While the RCT study consisted of 5,446 individuals by site, a handful of participants worked in qualifying roles in more than one site. For the Follow-Up Survey, those participants were randomly selected to provide feedback for only one of their qualifying sites—resulting in 5,371 unique individuals invited to take part. Note that some internal reports use a denominator of 5,322 “valid invitees” (e.g., excluding survey invites that immediately bounced or failed), resulting in a slightly higher reported response rate of 68%.

⁵ Among those randomly assigned to an ECSTRA bonus offer, the Follow-Up Survey response rate was slightly higher—69% or 2,832 of 4,105.

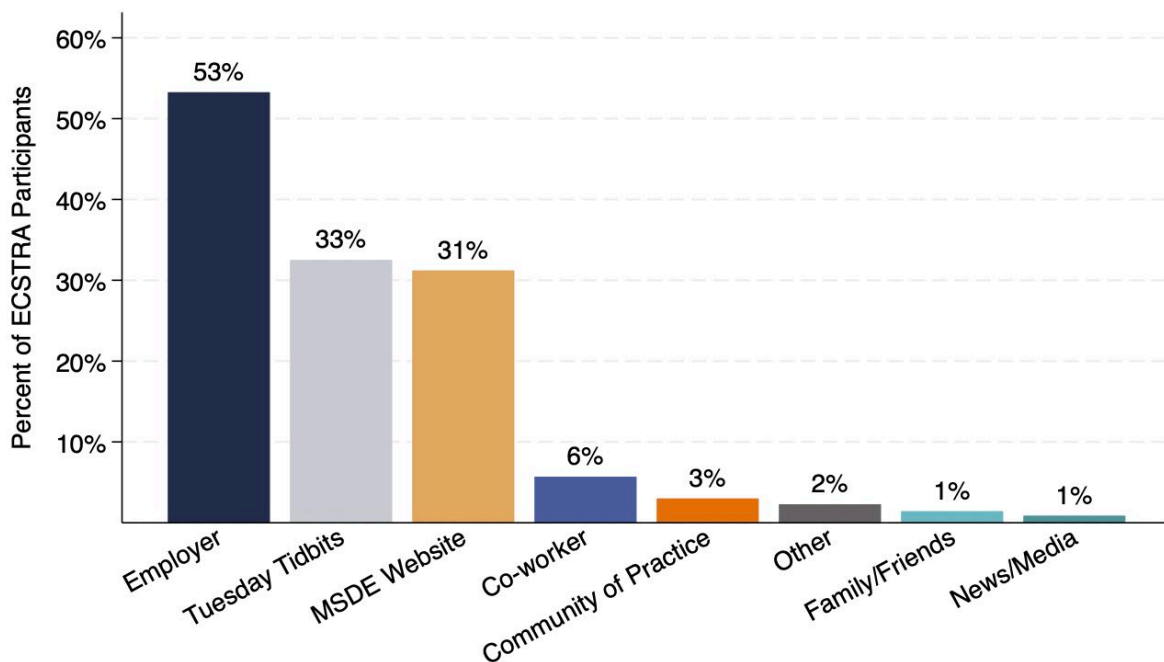
⁶ In a separate report focused on the ECSTRA Program’s causal effects, we also present descriptive statistics about what feelings participants reported having about ECSTRA, how bonuses helped recipients, and how participants felt that ECSTRA bonuses shaped their career decisions (see [Atteberry et al., 2025](#))—beyond the more program implementation-related feedback detailed in this report.

Findings

(Q1) How Did ECSTRA RCT Study Participants Learn About the Program?

The Follow-Up Survey asked ECSTRA RCT Program participants how they first learned about the ECSTRA Retention Bonus Program. These findings can help MSDE understand what communication strategies are most effective at reaching employees at licensed childcare sites. Survey respondents were asked to check any of the following seven options that applied to them: (1) employer, (2) MSDE’s [Tuesday Tidbits](#), (3) MSDE website, (4) co-worker, (5) community of practice, (6) family or friends, (7) news/media ([full question text in Appendix C](#)). They were also given the option to select “other” and write in any other sources. While some individuals learned of the program from multiple sources, 77% heard about it from a single source.⁷ [Figure 1](#) shows the distribution of all selected sources.

Figure 1. How ECSTRA RCT Participants Learned About the Program

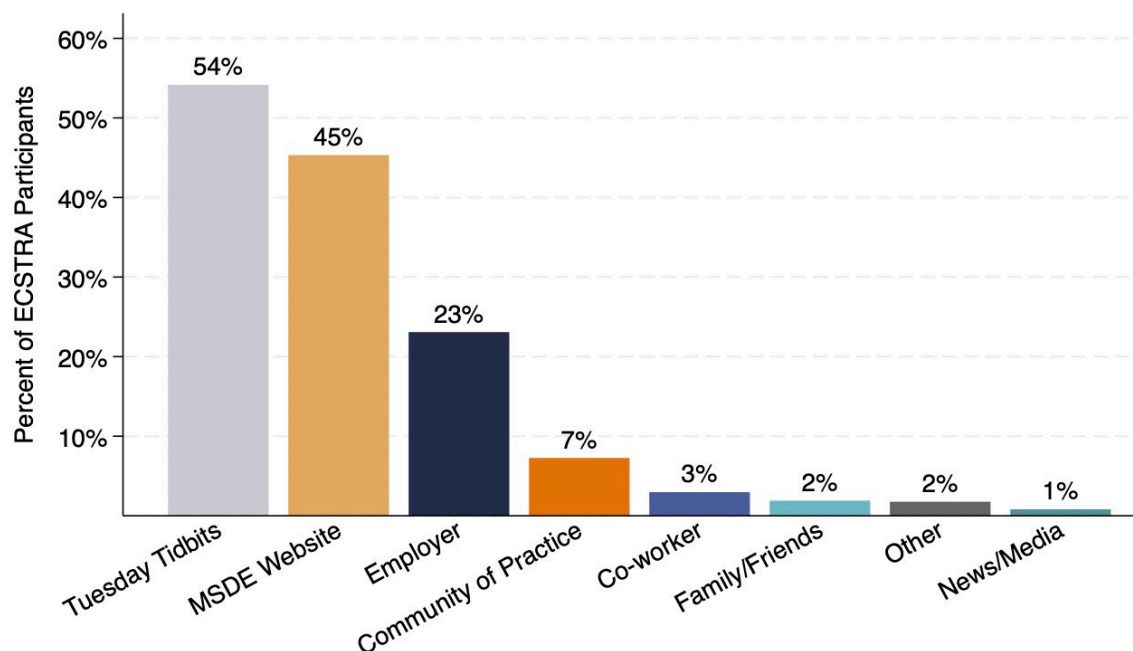


Note: The percentage atop each bar is the share of ECSTRA participants who used that source to learn about ECSTRA. Across the eight sources, percentages sum to greater than 100%, as some participants selected multiple sources.

Individuals were most likely to hear about ECSTRA from their employer (53%), followed by MSDE’s Tuesday Tidbits communication (33%), which is distributed to early educators in the form of an email (in fact, those who selected “other” largely self-reported their source as “email”). The third most common information source was the MSDE website (31%). Given that “employer” appeared to be the most common source of information for ECSTRA RCT participants, we next looked at responses only from site leaders (i.e., employers). [Figure 2](#) shows the responses from just those in leadership positions.

⁷ 77% (2,781 of 3,605) selected a single source of information, 17% (617 of 3,605) selected 2 sources, 5% (173 of 3,605) selected 3 sources, and 1% (34 of 3,605) selected 4 or more sources.

Figure 2. How ECSTRA Site Leaders Learned About the Program



Note: The percentage atop each bar is the share of ECSTRA site leaders who selected that source of program information. Across the eight sources, these percentages sum to greater than 100%, because some leaders selected multiple sources.

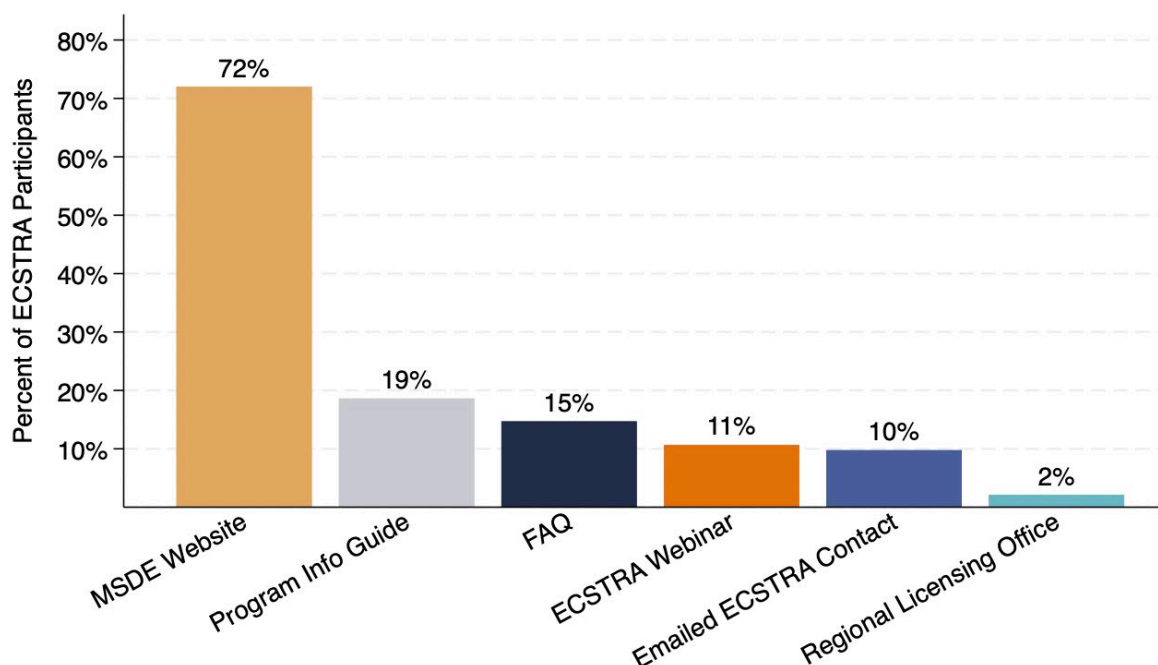
Site leaders primarily learned about ECSTRA from Tuesday Tidbits (54%), followed by the [MSDE website](#) (45%).⁸ These findings suggest that MSDE’s Tuesday Tidbits was a powerful mode of communication for this group, along with resources housed on the MSDE website.

(Q2) What MSDE-Provided Resources Did ECSTRA RCT Participants Use to Learn About the Program’s Structure?

MSDE provided resources for anyone to learn about the ECSTRA Program, including webinars to introduce ECSTRA and live office hours sessions to answer questions throughout the application window. These resources were also posted to the MSDE website. In addition, MSDE distributed informational emails, an online FAQ PDF, a website page dedicated to ECSTRA, and a Program Information Guide. The Follow-Up Survey asked ECSTRA RCT participants to select any/all resources they used to learn about how the ECSTRA Program worked, with the option not to answer if they did not use any (full question text in [Appendix C](#)). ECSTRA RCT participant responses to this question are shown in [Figure 3](#). Most respondents recorded only one resource they used to learn about ECSTRA, though 350 did not select any of the options. The results show that most employees used the MSDE website as their primary source of information, which may help guide future MSDE decision-making when providing resources to employees. It is worth noting that the Program Information Guide and FAQ PDFs were available on the MSDE website.

⁸ While 23% of site leaders referenced employers, this could be interpreted either as other senior personnel, or higher levels of management, such as in the case of multi-site franchises.

Figure 3. Resources Participants Used to Learn About ECSTRA



Note: The percentage atop each bar is the share of ECSTRA participants who selected that ECSTRA Program resource. Across the six sources, these percentages sum to greater than 100%, because some participants selected multiple resources.

(Q3) How Clear Were the Features of the ECSTRA Program?

All ECSTRA RCT participants were asked about the clarity of five aspects of the program (full question text in [Appendix C](#)): program purpose, participation requirements, eligibility to receive a bonus, the amount of the bonus, and bonus timing. [Figure 4](#) shows the percentage of participants—by bonus offer group—who had a somewhat or very clear understanding of the five program aspects. Overall, upwards of 90% of ECSTRA RCT participants reported that every aspect of the ECSTRA Program was clear (somewhat or very). A contributing factor may have been that the application process itself required applicants to affirm that they had read the program materials and check boxes that they understood specific key features. These survey results suggest that the methods MSDE leveraged to explain the program were effective. As one might expect, respondents' understanding of program details was slightly less clear among those who were randomly selected not to receive a bonus offer (the control group). This makes sense, as these individuals did not have any engagement with the program between the time they were notified that they were not selected (October 2023) and the Follow-Up Survey ten months later. The only instance where fewer than 90% of respondents understood program features clearly was among control group participants regarding the timing of bonus payments (88.5%)—again, an expected response since this group was not offered any bonus. Across the five program features, bonus timing was slightly less clear for everyone. While most (>88.5%) were very or somewhat clear on bonus timing, a handful reported being “not at all clear” on when to expect bonuses: 5.3, 7.3, and 5.9% of the \$1000-, \$2000-, and \$3000-groups, respectively. Overall, this represented just 6% of bonus-eligible ECSTRA participants (175 of 2,832).

Figure 4. Percent of ECSTRA RCT Participants by Bonus Group Who Reported Being Very Clear (Dark Green) or Somewhat Clear (Light Green) About the...



(Q4) Did Those Receiving Bonuses Understand Their Bonus Offer?

Those ECSTRA participants who were randomly assigned to receive a bonus offer (treatment group) were asked what their bonus offer amount had been (full question text in [Appendix C](#)). [Table 1](#) compares the participants' self-reporting of their bonus offer amount to what their actual bonus offer was. The green shaded cells highlight cases where the respondent's self-reported bonus offer amount matched their actual MSDE-assigned bonus offer amount.

Table 1. Comparing MSDE Assigned and Self-Reported Bonus Levels

		Self-Reported Bonus Level				
		\$1,000 Bonus	\$2,000 Bonus	\$3,000 Bonus	Do Not Know	Total
MSDE Assigned	\$1,000 Bonus	91%	1%	2%	6%	
		847	9	17	54	927
	\$2,000 Bonus	16%	79%	1%	4%	
		150	730	13	36	929
	\$3,000 Bonus	6%	1%	88%	5%	
		55	6	863	52	976
Total		1,052	745	893	142	2,832

The vast majority overall (86%) accurately reported the bonus amount they were offered (2,440 of 2,832). However, there was some mismatch across the three ECSTRA participant bonus offer groups (offered \$1000, \$2000, or \$3000). As shown in green, those offered a \$1000 bonus had the highest consistency, with 91% having matching responses between self-reporting and MSDE records (847 of 927). Those offered a \$2000 bonus had the lowest match rate (79%, or 730 of 929). Those offered a \$3000 bonus had an 88% match rate (863 of 976).

(Q5) Were ECSTRA Bonus Recipients Aware They Received Their Bonus?

Those who were retained at their site and were sent their ECSTRA bonuses were also asked whether they were aware of having received both parts of their bonuses (full question text in [Appendix C](#)). [Table 2](#) shows the results: Values across rows are the *actual* number of ECSTRA bonuses each participant was sent by MSDE, while the column values indicate how many bonuses the respondent *believed* they had received. Cells along the diagonal (in green) represent a match between actual and believed bonus receipt. Overall, 54% of respondents self-reported having received the same number of payments as were actually distributed by MSDE (1,534 of 2,832).⁹ This rate differs substantially across groups, however. For instance, among the 103

⁹ The group that received “only [the] second” bonus is excluded here due to its very small sample size (N=5). In general, it was not possible to receive *only* the second bonus—those who had already left their site by March would not have been eligible for the June retention bonus either. The rare exception (N=5) occurred when a site leader failed to submit data during the first round but did so in the second, allowing those 5 educators to qualify for and receive only the second bonus. In practice, 26 respondents reported receiving only the second payment. Of those, MSDE reported actually distributing *both* bonuses to nearly all of them (23 of 26).

Table 2. Actual Payment Distributions Compared to Payments Reported as Received

		Self-Reported as Received			Total
		Both	Only First	None	
MSDE Distribution	Both	52% 1,356	45% 1,175	3% 83	2,614
	Only First	5% 4	91% 78	5% 4	86
	None	0% 0	5% 5	95% 98	103
	Total	1,360	1,258	185	2,803

participants who received no bonuses (third row), a high proportion—95%—also reported they had received no bonuses. Agreement is also high among those who received only the first bonus (91%). The agreement rate is lower among those to whom MSDE distributed both payments: 52% said they had indeed received both, while 45% said they had only received the first. This could be due to the timing of the Follow-Up Survey,

which may have partially overlapped with an extended MSDE bonus distribution window, even though the survey was two months after the 8-month retention period.¹⁰ These findings suggest an opportunity to improve the timeliness of bonus distribution.

(Q6) What Feedback Did the ECSTRA RCT Participants Want to Share with MSDE and the UVA Research Team?

ECSTRA RCT participants from both treatment and control groups were given the opportunity to share feedback through an optional open-ended survey item (full item text in [Appendix C](#)). About 24% (880 of 3,605) chose to do so.¹¹ While we provide a qualitative summary below, it is important to keep in mind that this feedback may be less representative of *all* ECSTRA RCT participants' perspectives, since only 24% of them provided any open-ended feedback at all.

We coded the 880 open-ended responses into four broad themes. Because a participant's response might touch on more than one theme, the total number of theme mentions (1,057) exceeds the number of individual responses. As shown in [Table 3](#), 32% of the 1,057 mentions related to positive program feedback (339 mentions), 29% concerned suggestions for improving payment distribution (304 mentions), 21% were reactions to the pilot program's design (225 mentions), and 13% were related to communication improvements (139 mentions). The remaining 5% that did not fit these themes were classified as

"I love how they always give educators opportunities and reward them for their hard work."

(Theme 1: Positive Program Feedback)

¹⁰ MSDE's distribution of the second ECSTRA bonuses took place shortly before the Follow-Up Survey was administered. It is therefore possible that some survey respondents may not have received or realized that they had received their bonus payments yet. We do not find, however, that the agreement rate is substantially higher among those who completed the Follow-Up Survey toward the end of August.

¹¹ 1,058 participants responded to the prompt in some way, though 178 (16.8%) were classified as "non-responses" that included statements like "Yes," "No," "N/A," or responses unrelated to ECSTRA. These were removed from our sample of open-ended responses, along with those who submitted no response.

“other”; these often relayed personal contextual information (50 mentions). In sum, the most common theme was appreciation or gratitude for the program, though participants also offered consistent and constructive suggestions for program improvement.

Table 3. How Often Each Theme Was Mentioned in Open-Ended Feedback Responses

Themes Mentioned in Open-Ended Responses	# of Mentions	% of Mentions
1. Positive Program Feedback	339	32%
2. Payment Distribution Improvements	304	29%
3. Reactions to Pilot Program's Design	225	21%
4. Communication Improvements	139	13%
5. Other	50	5%
Total*	1,057	100%

**Note: This total accounts for the classification of individual responses that reflected more than one theme.*

To better understand participants' perspectives and surface actionable insights, we also coded each open-ended response into more granular sub-categories within these larger themes. In the sections that follow, we explore each theme and its sub-categories, highlighting opportunities to learn from participants' experiences and consider potential areas for improvement.

More on Theme 1: Positive Program Feedback (339 Overall Mentions)

[Table 4](#) presents the 5 sub-categories identified within the broader theme of Positive Program Feedback.¹² Many respondents shared general appreciation for the initiative (52%), including conveying to MSDE how grateful they were for the program, and that it had a positive impact on them.

“Everything worked out well, and it's a great help for us to pay for rent, school, and food.”
(Theme 1: Sub-Category 1)

Table 4. Sub-Categories Within Theme 1, Positive Program Feedback

Sub-Categories within Theme 1	# of Mentions	% of Mentions
1. General Positive Feedback	188	52%
2. Motivation to Stay and Improve	60	17%
3. Ease/Clarity of Program Participation	51	14%
4. ECSTRA Communication	42	12%
5. Recognition of Work	22	6%
Total*	363	100%

**Note: Some positive responses touched on several positive sub-categories. As a result, Table 4's total count (N=363) is slightly larger than the overall count of positive mentions shown in Table 3 (N=339).*

¹² Theme 1, Positive Program Feedback, was mentioned 339 times—by about 9% of 3,605 ECSTRA participants.

“I found the program to be clear and concise, and a wonderful incentive for all. Keep doing what you are doing. It works great!”

(Theme 1: Sub-Category 2 & 3)

A few of these respondents specifically mentioned how important the help was to their personal finances. Participants also shared that they valued ECSTRA as a reward for staying in their ECE site/position and how it opened opportunities for further professional

development. (17%). Others touched on how they found the application and participation process to be easy (14%). Additionally, 12% related positive feelings about the communication around ECSTRA. Finally, some respondents specifically mentioned how they valued the recognition of their work as early childhood educators inherent to the ECSTRA Program (6%). These mentions support how appreciated the ECSTRA Program was and demonstrate that ECSTRA may have influenced employee morale and retention for many who took part and provided feedback.

“I think this whole thing is very nice and means a lot to have daycare teacher[s] recognized for our hard work and commitment to our jobs.”

(Theme 1: Sub-Category 5)

More on Theme 2: Improving Payment Distribution (304 Overall Mentions)

The second most common open-response theme was related to payment distribution improvements. [Table 5](#) presents the 4 sub-categories associated with payment distribution.¹³

Table 5. Sub-Categories Within Theme 2, Improving Payment Distribution

Sub-Categories within Theme 2	# of Mentions	% of Mentions
1. Payment Timelines and Communication	250	76%
2. Payments Not Received or Misdirected	45	14%
3. Recommendations for Future Distribution	26	8%
4. Tax-Related Concerns	7	2%
Total*	328	100%

**Note: Some payment distribution responses touched on several payment distribution sub-categories. As a result, Table 5's total count (N=328) is larger than the overall count of payment distribution mentions in Table 3 (N=304).*

By far the most common sub-category within the Improving Payment Distribution theme related to payment timelines and communication, making up 76% of mentions related to this theme (250 of the 328). Several participants expressed frustration that the expected payment timelines were not met, and/or that communication from MSDE about delays or anticipated timing was unclear. For context, MSDE initially indicated that payments would be distributed in April and late June. The April payments were issued at the end of April, but the June payments were

“I think that communication about when and how the payments are distributed needs to be more specific and if there is a delay to let the participants in a timely manner since I know a lot of staff needed the money.”

(Theme 2: Sub-Category 1)

¹³ Theme 2, Improving Payment Distribution, was mentioned 304 times—by about 8% of 3,605 ECSTRA participants.

delayed until mid-July. Some respondents noted that delays cause stress, particularly because they had been counting on the funds to cover time-sensitive expenses. The open-response mentions from this theme highlight that, if changes must be made to the payment timing, communication should be clear and sent through multiple avenues. Combining messaging around payments with other updates may not be advisable. As evidenced in this report, employers, Tuesday Tidbits, and the MSDE website are key sources of information for early childcare employees and could all be part of any updates around payment processes—in addition to direct emails.

One research team observation about ECSTRA's implementation was that distributing payments proved more complex than originally anticipated. While the structure and intent of the bonuses were clear, the logistics of processing them required more time and coordination than expected—particularly between MSDE's ECE division and its finance systems specialists. Although the payment timeline sub-category was the dominant concern within the Improving Payment Distribution theme, it is worth noting that the 250 mentions of this issue represent only a small portion of all ECSTRA participants who ultimately received a bonus.

The second sub-category within the Improving Payment Distribution theme related to misdirected or unreceived payments, although it was relatively rare (14% of mentions). For context, all ECSTRA participants already had payment information—either a mailing address or direct deposit details—on file with MSDE before ECSTRA began.¹⁴ In addition, all ECSTRA participants were sent an email explaining that bonuses would be distributed using their existing payment details, along with instructions for updating that information, if needed. Of course, if there were errors in the payment information on file, payments could not be delivered.

A few participants made suggestions for future bonus distributions, including 8% (26 of 328) who requested that MSDE offer direct deposit—even though this option was already available. This suggests that communication could be strengthened to ensure all participants are aware of how to access their bonuses. Finally, just 7 of the 328 mentions conveyed tax-related concerns about bonus payments.

The mentions in the Improving Payment Distribution theme highlight a challenge for policymakers implementing a retention bonus program. The payment process can be tedious, and even with direct communications around payment methods, there will be mistakes and corresponding frustration. Those designing such programs should fully articulate the exact payment method procedures before the program launches. This process should be designed with direct consultation with the entity that initiates those payments. In addition, the process should include an easy way for participants to check and update their payment information before any payments are distributed.

¹⁴ ECSTRA participants' payment information was already on file because all ECSTRA participants had to be credentialed to take part in the program, and MSDE already collected this information for credentialing program payments.

More on Theme 3: Reactions to Pilot Program’s Design (225 Overall Mentions)

Next, [Table 6](#) examines comments related to the third most common open-response theme, Reactions to ECSTRA Pilot Program’s Design (including the use of a lottery to determine program participation and the varied bonus amounts).¹⁵ Recall that the lottery served two purposes: first, in any situation where there are more interested applicants than a pilot program can accommodate, a lottery can serve as a fair way to allocate limited spots (rather than first-come, first-served, for example). Second, the lottery also made it possible for MSDE to definitively determine whether larger bonuses induced larger reductions in teacher turnover—an important question for future program implementation and cost. While the need for the lottery was explained in webinars, written materials, and in the application, it was nonetheless expected that the lottery feature could induce some negative reactions among early educators.

<i>Table 6. Sub-Categories Within Theme 3, Reactions to ECSTRA Pilot Program’s Design</i>		
Sub-Categories within Theme 3	# of Mentions	% of Mentions
1. Fairness of Lottery System	116	45%
2. Recommendations for Changes	113	44%
3. Not Selected in Lottery (Control Group Confusion)	19	7%
4. Differing Bonus Amounts Received Across Sites Within Same Network/Franchise	9	4%
Total*	257	100%

**Note: Some theme 3 responses touched on several sub-categories. As a result, Table 6’s total count (N=257) is slightly larger than the overall count of theme 3 mentions in Table 3 (N=225).*

There were just 225 negative reactions to the pilot program’s design overall—just 6% of all of the ECSTRA RCT participants. Yet, to better understand educators’ concerns about the program’s design, including the lottery, open-ended responses that mentioned this theme were further sub-categorized, as shown in [Table 6](#). First, the most common program design-related concern dealt with how participants perceived the fairness of a lottery system (45%; 116 of 257 mentions). These mentions reflect a fundamental tension inherent in using lotteries to allocate limited resources. A lottery can be viewed as a fair and unbiased way to distribute limited opportunities—avoiding advantages based on application timing or center resources. However, from the perspective of individual educators—especially those randomly not selected or offered a lower

“It seemed unfair that 25% of applicants got zero \$, and some got \$3000.”
(Theme 3: Sub-Category 1)

bonus amount—the process can feel arbitrary, especially if the rationale for randomization is not immediately compelling. While this tension is not easily resolved, it underscores the importance of transparent communication.

¹⁵ Theme 3, Reactions to ECSTRA Pilot Program’s Design, was mentioned 225 times—by about 6% of 3,605 ECSTRA participants.

Second, 44% of the comments in the Pilot Program Design theme were about specific recommendations for changes to ECSTRA's design (113 of 257). These comments requested larger bonuses, basing bonus amounts on credential status or experience rather than lottery outcome, or allowing bonuses to follow individuals from one site to another. While some of these ideas—like offering bonuses to all staff—were not feasible given funding limitations, others conflicted with the core goals of the program. For instance, allowing bonuses to follow educators across sites would have undermined the program's aim of promoting stability within a specific site, so that children experienced consistent care from familiar educators.

A few mentions in this theme related to confusion from control group respondents stating that they were not selected (19 of 257 mentions), and, finally, other mentions (9 of 257) conveyed feelings of tension between participants at different sites within the same franchises or childcare networks where employees across sites received differing bonus amounts, or no bonus at all (since the randomization took place at the site level).

More on Theme 4: Communication Improvements (139 Overall Mentions)

The last theme of the open-ended responses related to improving overall program communication.¹⁶ [Table 7](#) groups these 149 mentions into 5 sub-categories.

Table 7. Sub-Categories Within the Theme 4, Communication Improvements

Sub-Categories within Theme 4	# of Mentions	% of Mentions
1. Clearer, More Frequent/Proactive Communication	44	30%
2. Clarity Regarding ECSTRA Eligibility Requirements or Application Process	34	23%
3. Difficulty in Contacting MSDE Regarding ECSTRA Questions	25	17%
4. Clearer, More Frequently Updated System to Check Individual-Level Status	24	16%
5. Better Participant-Information Recordkeeping or Verification	22	15%
Total*	149	100%

**Note: Some feedback touched on several themes, resulting in this count being larger than the overall count of mentions shown in Table 3. Some theme 4 responses touched on several sub-categories. As a result, Table 7's total count (N=149) is slightly larger than the overall count of theme 4 mentions in Table 3 (N=139).*

About 30% of these comments expressed a desire for more frequent communication about ECSTRA (44 of 149 mentions). Another 23% asked for more clarity in the application and eligibility processes (34 of 149). Another 17% indicated that MSDE was either slow to respond to ECSTRA questions or that they never received a response (25 of 149). About 16% suggested a need for a system to check for individual-level status (24 of 149), offering ideas such as an online

¹⁶ Theme 4, Improving Communication, was mentioned 139 times—by about 4% of 3,605 ECSTRA participants.

portal where respondents could more easily access their individualized ECSTRA status and payment information. Finally, 15% of mentions pertained to better participant record-keeping or verification processes on the part of MSDE (22 of 149).

MSDE made a conscientious effort to maintain a high level of communication with employees throughout ECSTRA. MSDE utilized multiple methods—emails, reference documents, and webinars. The Communication Improvement theme was mentioned by roughly 4% of all ECSTRA RCT participants. In sum, the most concrete and actionable suggestion from the open-response feedback was the recommendation of an online, frequently updated portal. Having a central hub from which to retrieve bonus information and payment status could address needs both here and related to the payment concerns expressed previously.

“Some team members who did not speak English had difficulty understanding and needed help. Perhaps if another round is considered more help can be provided for non-English speaking teachers.”

(Theme 4: Sub-Category 1)

Conclusion

The ECSTRA pilot program represents a promising example of how innovative, research-informed policy design can support the ECE workforce. MSDE, in partnership with a research team at UVA, successfully launched and implemented a large-scale retention bonus program aimed at reducing workforce turnover—a persistent and critical challenge in ECE. Despite the complexity of the rollout and the constraints of one-time federal recovery funds, the ECSTRA Program was received positively by many participants and largely achieved its intended aims during implementation.

Follow-Up Survey results indicate that the majority of ECSTRA RCT participants understood the program’s structure and requirements. Participants most often learned about the program from their employers or MSDE’s Tuesday Tidbits email newsletter—an important finding for agencies designing future communication strategies. Among those assigned to receive a bonus, nearly 9 in 10 could accurately recall the amount they were offered, and many shared positive reflections on the program. These findings suggest that MSDE’s communication materials and outreach mechanisms were generally effective in conveying key information.

The most common theme in participants’ open-ended feedback was appreciation for the ECSTRA Program, with many expressing gratitude for the support, recognition, and positive impact on their morale. Respondents also highlighted how the bonuses motivated them to stay in their roles and helped them feel more valued. Participant feedback also revealed some areas for improvement. While a relatively small share of participants raised concerns, several themes emerged that merit attention. First, many respondents offered constructive suggestions to improve payment distribution—most notably around timelines, transparency, and ease of tracking. Though MSDE communicated expected payment dates and methods, delays—especially in the second payment—caused confusion and stress for some participants. Importantly, these issues

appeared to stem not from a lack of planning but from the complexities of coordinating financial systems and processing high volumes of payments across different agencies. Future programs would benefit from closer integration between ECE program leads and finance specialists during the design phase, as well as clear, multi-channel communications to participants regarding payment logistics and status updates.

Second, reactions to the pilot program's design revealed a small amount of tension between collective program goals and individual perceptions of fairness related to the lottery process. The use of randomization allowed MSDE to equitably allocate limited program slots and enabled a rigorous evaluation of program impacts. However, for educators who were not selected or who received a lower bonus amount, the outcome could understandably feel arbitrary. While this concern was raised by only about 3% of all ECSTRA RCT participants, it nonetheless highlights the importance of explaining not only how policies are structured, but why. Continued transparency, alongside efforts to help participants understand the long-term value of policy learning, may help mitigate frustration in future pilot efforts.

Finally, although only a small portion of respondents raised concerns about overall communication, several highlighted the potential value of a centralized online portal for tracking eligibility, bonus status, and payment history. Implementing such a tool could improve transparency and ease administrative burdens for both participants and program staff.

In sum, ECSTRA was a thoughtfully designed and largely well-executed initiative that addressed an urgent challenge in the ECE workforce. Its success offers a roadmap for future retention bonus programs while also illuminating areas where small adjustments could yield even stronger implementation and participant satisfaction. As states continue to invest in and evaluate workforce stabilization efforts, the lessons from ECSTRA can serve as a valuable guide.

Appendix A. ECSTRA Program Participants, Compared to Subset Who Responded to the Follow-Up Survey

When considering demographic matching between all ECSTRA RCT participants versus those who responded to the Follow-Up Survey, we tested the difference in mean values for statistical differences. The results in [Table A1](#) show that, in most cases, the representation is balanced. The cases in which they are not balanced included those who are female, White, Hispanic, site leaders, or work in licensed centers or registered sites. While there are many areas of similarity for the subset of Follow-Up Survey respondents and ECSTRA RCT participants, it is important to acknowledge areas where the representation is different and therefore may not be as applicable to some groups when reporting results.

Table A1. Demographics of ECSTRA Participants and Those Participants Who Completed the Follow-Up Survey

	ECSTRA RCT Sample (N=5,446)		Subset Who Completed Follow-Up Survey (N=3,605)		Differences in Means
	Mean	(% Missing)	Mean	(% Missing)	
Employee Demographics		(0.0%)		(0.0%)	
Age	42.7		42.2		Similar
Female	97.9%		98.4%		Statistical Difference *
White	36.7%		44.0%		Statistical Difference **
Black	27.2%		31.2%		Similar
Asian	5.9%		7.2%		Similar
Hispanic	14.7%		13.1%		Statistical Difference *
Other/Multi Race	10.8%		4.5%		Similar
Unknown Race	4.6%		0.0%		Similar
Employee Background		(0.0%)		(0.0%)	
Credentialed (as of Oct 2023)	100.00%		100.0%		Similar
Site Leader	22.0%		23.0%		Statistical Difference *
Site Characteristics					
Averaged Across		(0.1%)		(2.9%)	
Educators					
Large Home Site	1.6%		1.4%		Similar
Letters of Compliance Site	2.6%		2.7%		Similar
Licensed Center	85.6%		84.1%		Statistical Difference *
Registered Site	10.3%		11.8%		Statistical Difference **
Offers Infant Care	73.2%		72.3%		Similar
Offers Toddler Care	75.6%		74.5%		Similar
Offers Preschool Care	98.5%		98.2%		Similar
Offers School Age Care	65.4%		64.2%		Similar
EXCELS Rated	95.4%		94.8%		Similar
Licensing Region					
Averaged Across		(0.1%)		(2.9%)	
Educators					
Anne Arundel County	7.0%		7.2%		Similar
Baltimore City	9.4%		9.1%		Similar
Baltimore County	13.4%		14.3%		Similar
Prince George's County	7.6%		6.9%		Similar
Montgomery County	23.7%		21.6%		Similar
Howard County	6.3%		6.7%		Similar
Western Maryland	4.4%		4.5%		Similar
Upper Shore	2.3%		2.5%		Similar
Lower Shore	3.9%		4.2%		Similar
Southern Tri Counties	5.9%		6.1%		Similar
Harford and Cecil Counties	5.1%		5.5%		Similar
Frederick County	6.4%		6.2%		Similar
Carroll County	4.6%		5.1%		Similar

*Note: To determine if the mean characteristics of the Follow-Up Survey respondents were statistically distinguishable from the mean characteristics of the full population of RCT study participants, we specified a series of unconditional OLS regression models, each with one of the characteristics shown above as an outcome (errors clustered at the site level). We then conducted post-hoc tests of the null hypothesis that each mean characteristic (the intercept) was statistically distinguishable from the RCT sample population mean. Statistical significance: * for $p < .05$, ** for $p < .01$, and *** for $p < .001$.

Appendix B. Each ECSTRA RCT Treatment Group, Compared to Subset of Each Who Responded to the Follow-Up Survey

To assess the representativeness of the survey sample, we compared each of the ECSTRA bonus offer (treatment) groups to their respective subsets who completed the Follow-Up Survey—a total of six comparisons. As shown in [Table B1](#), the demographic and site characteristics of each treatment group generally matched the subset of each who responded to the survey. We considered differences within each treatment group to verify confidence that the responses could be considered reflective of all ECSTRA RCT bonus group employees.

Table B1. Comparison of Demographics for ECSTRA Bonus Group Participants and Follow-Up Survey Respondents

	\$1,000 Group			\$2,000 Group			\$3,000 Group		
	All (N=1,388)	Responders (N=927)	Differences in Means	All (N=1,355)	Responders (N=929)	Differences in Means	All (N=1,413)	Responders (N=976)	Differences in Means
Employee Demographics									
Age	43.1	42.6	Similar	43.0	42.4	Similar	42.0	41.6	Similar
Female	98.4%	99.1%	Statistical Difference *	97.5%	98.2%	Similar	97.7%	98.0%	Similar
White	37.2%	45.3%	Statistical Difference **	34.2%	41.6%	Statistical Difference **	37.7%	44.6%	Statistical Difference *
Black	26.7%	31.0%	Similar	29.7%	33.8%	Similar	26.4%	30.2%	Similar
Asian	6.7%	8.3%	Similar	4.9%	6.0%	Similar	6.7%	7.7%	Similar
Hispanic	13.5%	11.2%	Similar	15.7%	14.2%	Similar	15.7%	13.2%	Similar
Other	11.0%	4.2%	Statistical Difference ***	10.5%	4.4%	Statistical Difference ***	10.5%	4.3%	Statistical Difference ***
Unknown Race	4.9%	0.0%	Similar	5.0%	0.0%	Similar	3.0%	0.0%	Similar
Employee Background									
Credentialed (as of October 2023)	100.0%	100.0%	Similar	100.0%	100.0%	Similar	100.0%	100.0%	Similar
Site Leader	22.2%	22.2%	Similar	21.7%	22.9%	Similar	21.5%	22.7%	Similar
Site Characteristics Averaged Across Educators									
Large Home Site	1.4%	0.8%	Statistical Difference *	1.7%	1.3%	Similar	1.5%	1.3%	Similar
Letters of Compliance Site	2.9%	3.2%	Similar	2.4%	1.6%	Similar	1.2%	1.7%	Similar
Licensed Center	85.2%	85.3%	Similar	85.5%	85.1%	Similar	87.8%	85.5%	Similar
Registered Site	10.6%	10.7%	Similar	10.5%	11.9%	Similar	9.6%	11.6%	Similar
Offers Infant Care	75.9%	75.1%	Similar	68.6%	67.3%	Similar	75.9%	75.6%	Similar
Offers Toddler Care	76.4%	76.1%	Similar	74.3%	72.5%	Similar	78.5%	77.3%	Similar
Offers Preschool Care	99.2%	98.9%	Similar	98.4%	98.0%	Similar	98.5%	98.0%	Similar
Offers School Age Care	71.7%	68.8%	Similar	60.8%	58.8%	Similar	67.4%	66.0%	Similar
EXCELS Rated	95.0%	94.4%	Similar	95.8%	95.0%	Similar	95.4%	93.9%	Similar
Licensing Region Averaged Across Educators									
Anne Arundel County	7.7%	8.3%	Similar	6.1%	5.9%	Similar	7.3%	6.8%	Similar
Baltimore City	7.9%	7.9%	Similar	9.8%	10.2%	Similar	9.1%	8.6%	Similar
Baltimore County	13.1%	14.0%	Similar	12.3%	12.5%	Similar	15.1%	16.1%	Similar
Prince George's County	8.4%	6.9%	Similar	7.6%	7.1%	Similar	6.9%	7.6%	Similar
Montgomery County	22.0%	19.6%	Similar	25.0%	24.4%	Similar	24.1%	20.7%	Similar
Howard County	6.1%	6.6%	Similar	7.1%	7.5%	Similar	6.7%	7.3%	Similar
Western Maryland	4.8%	4.7%	Similar	4.3%	3.9%	Similar	3.9%	4.8%	Similar
Upper Shore	2.8%	3.1%	Similar	1.6%	2.1%	Similar	1.3%	1.5%	Similar
Lower Shore	4.7%	5.3%	Similar	5.3%	5.6%	Similar	4.0%	4.1%	Similar
Southern Tri Counties	5.9%	6.0%	Similar	5.6%	5.0%	Similar	6.6%	6.8%	Similar
Harford and Cecil Counties	4.4%	5.6%	Similar	4.9%	5.0%	Similar	5.2%	5.4%	Similar
Frederick County	6.1%	5.9%	Similar	6.0%	5.9%	Similar	4.9%	4.9%	Similar
Carroll County	6.1%	6.1%	Similar	4.4%	4.9%	Similar	5.0%	5.4%	Similar

Note: To determine if the mean characteristics of the Follow-Up Survey respondents by treatment group were statistically distinguishable from the mean characteristics in the full population of RCT study participants, we specified a series of OLS regression models conditional upon treatment status, each with one of the characteristics shown above as an outcome (errors clustered at the site level). We then conducted post-hoc tests of the null hypothesis that each mean characteristic (the intercept) was statistically distinguishable from the RCT sample population mean. Statistical significance: * for $p < .05$, ** for $p < .01$, and * for $p < .001$*

In the \$1000 bonus group, there were differences in the indicator for female, the races White and Other, and the indicator for large home sites. For the \$2000 and \$3000 bonus groups, differences existed among the races for White and Other.

While there are many areas of similarity for the Follow-Up Survey respondents and their larger ECSTRA bonus groups, it is important to acknowledge areas where the representation is different. There is a possibility that, when we see differences in the respondent group, the answers may not be as applicable to those who did not take the survey; however, in this case, the differences are infrequent and—except for the racial group “Other”—low in significance.

Appendix C. August 2024 Follow-Up Survey

Response Paths and Question Text

ECSTRA RCT participants were flagged with a survey indicator and provided a different survey path from general participants so that researchers could ask them specific questions related to ECSTRA. Additionally, only those who were assigned to a bonus group were provided questions about their bonuses. [Figure C1](#) shows how the survey branched for these two groups of ECSTRA RCT participants.

Figure C1. Follow-Up Survey Branching for ECSTRA RCT Participants



All ECSTRA RCT participants had the opportunity to answer the questions in blue, as shown in [Figure C1](#). Only those who were in a \$1000, \$2000, or \$3000 treatment group saw the questions shown in orange. The rest of their survey was identical to other participants. More can be learned about the survey as a whole [here](#).

Question Wording and Answer Choices

The ECSTRA RCT participants were provided the following questions. Questions marked with a star (*) were required before they could move forward in the survey.

- How did you learn about the ECSTRA Retention Bonus Program?*
- My employer/boss/site leader
- Someone else I work with
- A community of practice and/or an organization that works with childcare providers
- Family or friends
- Maryland State Department of Education (MSDE) website
- Tuesday Tidbits
- News/Media
- Other
- Which of the following did you use to learn about the ECSTRA Program?
- The MSDE website
- ECSTRA Webinar
- Program Information Guide

- Frequently Asked Questions document
- Emailing the ECSTRA contact address
- Reaching out to the regional licensing office.
- How clear were the following parts of the ECSTRA Program?* (followed by the options “Very clear,” “Somewhat clear,” and “Not at all clear.”)
 - The purpose of the ECSTRA Program*
 - Who was initially eligible to apply to participate in the ECSTRA Program*
 - What you needed to do to receive any offered ECSTRA Retention Bonus*
 - The amount of money your ECSTRA bonus would be*
 - When in the year you would receive your ECSTRA bonus*
- If MSDE considers future rounds of the ECSTRA Program, do you have any feedback on what worked well or how to improve the program? (open-response)
- At the start of ECSTRA in November 2023, you were selected to participate. At that time, what was the total bonus amount you were told you would receive if you remained in your site/role for the next 8 months? (required for bonus groups)
 - \$1000
 - \$2000
 - \$3000
 - I don’t know
- Which of these two ECSTRA Retention Bonus payments did you receive? (required for bonus groups)
 - Both
 - Only the first
 - Only the second
 - Did not receive any

Bonus recipients were also asked how the bonuses made them feel and how they used their bonuses. For more information on those questions, see [Atteberry et al, 2025](#).

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