

# QUALITY RATINGS AND SYSTEM CHARACTERISTICS: PATTERNS IN THE ROUND 1 RACE TO THE TOP-EARLY LEARNING CHALLENGE STATES

The Race to the Top–Early Learning Challenge (RTT-ELC) grants program, sponsored by the U.S. Department of Education (ED) and U.S. Department of Health and Human Services (HHS), aimed to increase the number of high quality early learning and development programs. RTT-ELC awarded \$520 million in the first of three rounds of grants to help states develop and implement systems that rate early learning and development programs based on state-defined quality standards and help them improve on these standards. These systems are known as tiered quality rating and improvement systems (TQRIS). Programs at the lowest level meet a basic level of quality, whereas programs at the top levels meet the highest standards of quality as measured by one of these rating systems.

A key objective for RTT-ELC was to increase the number of early learning and development programs in the top rating levels of the TQRIS, and to increase the number of children with high needs, such as those from low-income households, enrolled in those programs. To meet this objective, states could try to encourage more programs to participate in TQRIS and achieve high ratings.

The likelihood that programs participate in TQRIS and achieve top rating levels could be influenced by the system characteristics and policies that states have selected for their TQRIS. These characteristics and policies could also affect the accuracy of the ratings as measures of programs' quality. However, little is known about how states' actual implementation of TQRIS characteristics and policies relate to programs' ratings. Understanding the patterns of ratings across states with different characteristics and policies could help inform next steps in the continued testing and development of TQRIS. These actions could ultimately help states advance toward the goal of increasing children's access to high quality programs.

This brief describes programs' ratings across the nine Round 1 RTT-ELC states, which had different TQRIS characteristics and policies in place during the grant period (2012 to 2016). Over this period, individual states changed few of their TQRIS characteristics and policies. TQRIS characteristics could affect all programs within a state, but the policies were often directed at particular types of programs. Thus, this brief presents patterns for several key TQRIS characteristics and policies, individual states, and four types of programs: (1) state-funded prekindergarten (pre-K) programs, (2) Head Start programs, (3) licensed centers that received child care subsidies, and (4) licensed centers that did not receive subsidies. The first three types of programs—state-funded pre-K, Head Start, and licensed centers that received subsidies—serve low-income children; the last type might serve fewer low-income children because they do not receive public funding to do so. The TQRIS characteristics and policies examined include the following:

• Three policies that could affect the accuracy of programs' ratings at entry: alternative pathways, automatic ratings, and entry level requirements. Alternative pathways and automatic ratings award certain types of programs (such as state-funded pre-K and Head Start programs) credit for meeting all or part of the TORIS standards. These policies are

based on the theory that these programs would likely qualify for high ratings because they meet external quality standards (such as those required to receive state pre-K and Head Start funds). Conversely, requirements that certain types of programs (such as licensed centers) enter at the lowest rating level could result in programs receiving lower ratings than they otherwise would have qualified for. Similar patterns of ratings for programs in states with and without these rating level policies might imply that the policies do not markedly reduce the accuracy of the ratings.

• Two characteristics and one policy that could affect programs' attainment of top rating levels: the length of time TQRIS had been implemented, the rating structure that determines programs' ratings, and financial incentives that increase as programs reach higher ratings. Longer-running TQRIS might have more programs at top rating levels because programs had additional time to improve. Rating structures that require programs to meet all standards of a given rating (building block) may hold programs at lower rating levels than structures (points or hybrid) that give programs the flexibility to earn a rating by accumulating enough points across different components of the standards. A financial incentive policy (tiered subsidy reimbursement rates) that increases programs' child care subsidies when they reach higher rating levels may encourage programs that serve children who receive these subsidies to achieve higher ratings.

Based on administrative and interview data from the nine states, programs' ratings at entry and attainment of top rating levels varied substantially across states, potentially because of the characteristics and policies examined, as well as other differences across states. Key findings include the following:

- State-funded pre-K and Head Start programs generally had high ratings at entry. These programs did not consistently enter at higher ratings in states that offered alternative pathways or automatic ratings than in states that did not.
- Licensed centers that did and did not receive subsidies generally had low ratings at entry. Only licensed centers that did not receive subsidies were more likely to enter at the lowest rating level in states that required them to do so than in states that did not.
- States that had implemented statewide TQRIS for 10 years or more by 2016 had higher percentages of programs at the top two rating levels than those with fewer years of implementation.
- Substantially lower percentages of programs achieved the top two rating levels in states with building block rating structures than in states with hybrid or points rating structures.
- Tiered reimbursement rates were associated with higher percentages of licensed centers that received subsidies achieving top rating levels by 2016, but states with tiered reimbursement rates had higher ratings for all types of programs, even those that did not receive this financial incentive.

These findings suggest several issues that could be investigated by future research. For example, future research could examine how each of these policies and characteristics affects programs' quality, using consistent measures of the quality of the child care environment or children's development across different states and types of programs.

Providing young children from birth to age 5 with high quality early learning and development experiences, particularly in formal center-based and preschool settings, yields significant benefits—especially for children from low-income and disadvantaged households (Dearing et al. 2009; Weiland and Yoshikawa 2013). These benefits can include short-term improvements in social skills, behavior, and language skills, as well as long-term effects, such as pursuing more years of education and earning higher income (Campbell et al. 2002; Heckman 2011; Duncan and Manuson 2013). To improve the quality of early learning and development that children experience, states created TQRIS that establish quality standards, encourage programs to participate, and rate programs on the standards (Zellman et al. 2011). These systems also provide incentives for programs to earn higher ratings on these standards and publicize the ratings of individual programs to help parents choose higher quality programs for their children.

Developing and implementing TQRIS was a key aspect of the RTT-ELC program. Through TQRIS, RTT-ELC sought to strengthen the quality of early learning and development programs by promoting progress on five objectives (Box 1), including increasing access to high quality programs, particularly for children from low-income and disadvantaged households (U.S. Government Printing Office 2011). The Departments of Education (ED) and Health and Human Services awarded RTT-ELC grants through three rounds of competition. Round 1 grants, which this brief focuses on, were awarded in December 2011 to states—California. Delaware. Maryland, nine Massachusetts, Minnesota, North Carolina, Ohio, Rhode Island, and Washington. Of the Round 1 states, five had statewide TQRIS by 2011, the year in which RTT-ELC grants were awarded. By 2015, eight of the states had statewide TQRIS, and the ninth state— California—had locally administered TQRIS but statewide adoption was underway.

### Box 1. RTT-ELC's five TQRIS objectives

- 1. Developing and adopting a common, statewide TQRIS
- 2. Promoting participation in the TQRIS
- 3. Rating and monitoring early learning and development programs
- 4. Promoting access to high quality programs for children with high needs by:
  - Increasing the number of programs in the top levels of the TQRIS, and
  - Increasing the number and percentage of children with high needs who are enrolled in programs that are in the top levels
- 5. Validating the effectiveness of the TQRIS

The Institute of Education Sciences (IES) at ED initiated a study to learn about TQRIS in the nine states that received RTT-ELC Round 1 grants and to inform ongoing TQRIS development. The study focused on center-based early learning and development programs that served preschool-age children (these programs might have also served infants, toddlers, and school-age children). The study generated a series of reports and briefs.

The first report examined progress on the first three TQRIS objectives (outlined in Box 1) by describing the development, structure, and characteristics of TQRIS in the Round 1 states. It found that these states made progress developing statewide TQRIS (Kirby et al. 2017). However, they varied substantially in the ways they promoted participation in TQRIS, defined quality standards, verified and monitored that programs met the standards, and calculated ratings. Future work from this study plans to examine states' progress on the fourth and fifth TQRIS objectives, describing

(1) TQRIS participation and ratings across the Round 1 RTT-ELC states, specifically for types of programs that serve low-income children, and (2) findings from states' TQRIS validation studies.

This brief contributes to the larger study by assessing part of the fourth objective—promoting access to high quality programs by increasing the number of programs at top levels of the TQRIS. It describes patterns of ratings across the nine Round 1 RTT-ELC states, which had different TQRIS characteristics and policies in place during the grant period (2012 to 2016). These characteristics and policies could influence the level at which programs enter the TQRIS and whether they attain the highest rating levels. Therefore, it is useful to understand how states with different TQRIS characteristics and policies compare in their programs' attainment of the top rating levels.

This brief also contributes to the larger body of research on TQRIS in two key ways. First, it uses data on ratings from a large sample of programs across nine states. Thus, it can compare ratings for the same program types across states, as well as for different program types within states. Second, the brief describes programs' ratings under realistic implementation of the TQRIS characteristics and policies. This differs from simulation studies, which can describe how programs' ratings might theoretically change under different characteristics or policies (such as a different rating structure) but do not examine actual ratings (Isner et al. 2012; Faria et al. 2015). Thus, this brief complements those studies by providing evidence about aspects of implementation that could result in different ratings than might be theorized.

### **Research Questions**

To understand patterns in state-defined TQRIS ratings across RTT-ELC states with different TQRIS characteristics and policies, we examined two research questions:

- 1. What were the patterns in rating levels at TQRIS entry across states with different rating level policies?
- 2. What were the patterns in programs' attainment of the top two rating levels by 2016 across states with different TQRIS characteristics and policies?

For both of these research questions, we examined how TQRIS ratings varied across states. In addition, for the TQRIS policies, we presented patterns across states for each type of program that they targeted. To provide context for each of the research questions, we also present patterns of ratings at TQRIS entry and by 2016 for all states.

The answers to these research questions help shed light on how states' TQRIS characteristics and policies might relate to their progress in increasing the number of programs at top rating levels. First, if the same program types enter at different rating levels in states with rating level policies and states without them, this might raise questions about whether the policies artificially push programs toward particular ratings. Such a finding could also suggest that these policies might reduce the accuracy of ratings as measures of the programs' quality. Second, differences between programs' attainment of the top two rating levels across states with different TQRIS characteristics and policies could suggest that these characteristics and policies might contribute, in part, to these differences. Other differences across states could also be responsible for the findings, but the patterns could help identify topics for discussion and future investigation.

In Boxes 2 and 3, we describe the data sources, methods, and samples we used to answer these questions.

### Box 2. Data sources

*Telephone interviews with TQRIS administrators in the nine states* provided information about TQRIS characteristics from 2012 through 2016. We conducted two rounds of interviews. The first round, from October 2014 through April 2015, collected information on TQRIS characteristics from the start of the RTT-ELC grants in 2012 through the time of the interview. The second round, in December 2016 and January 2017, confirmed or updated this information.

Administrative data from the nine states provided information about TQRIS ratings from the start of the RTT-ELC grants in 2012 through June 2016. Data for 2016 are for only half the year (from January through June). Maryland did not officially launch its TQRIS until 2013, so its data span 2013 to 2016. Data from California are from the 16 counties in which the state implemented its TQRIS beginning in 2012. California provided data for these counties for 2014 to 2016. All other states have statewide TQRIS systems and we collected data for each of those states as a whole. In Ohio, data from before and after October 2013 (when the state moved from a system with three rating levels to one with five levels) were not comparable. For these reasons, we only used data from Ohio and California from 2014 to 2016.

We combined the TQRIS data with other administrative data, including data on licensing and child care subsidies, and state-funded pre-K and Head Start program lists and data, to build a longitudinal picture of early learning and development programs over the study period. All states provided data on state-funded pre-K, Head Start, and licensed programs that did and did not participate in TQRIS. However, most states did not provide data on license-exempt programs that were not either state-funded pre-K or Head Start programs (which are often considered license-exempt when operated in public schools), particularly if they did not participate in TQRIS. Only three states allowed license-exempt programs that were not receiving state pre-K or Head Start funds to participate in TQRIS. Such programs could include those administered on Tribal lands or on military bases, or those affiliated with a religious program. These programs accounted for less than 1 percent of TQRIS participating programs in 2016 in two of the three states and less than 5 percent in the third state.

For more information about the data sources, see Appendix A.

#### Box 3. Methods and samples

We used descriptive analyses to describe programs' ratings overall and by key TQRIS characteristics and policies, state, and type of program. For these analyses, we used standardized rating categories to describe ratings, calculated averages across groups of states, and described programs' ratings at entry and attainment of top rating levels by 2016 (the end of the RTT-ELC grant period).

The analyses focus on four types of programs. Due to data limitations, all analyses exclude license-exempt programs that were not either state-funded pre-K or Head Start programs (which are often considered license-exempt when operated in public schools).

### Standardized rating categories

We used five standardized rating categories that describe the position of rating levels within each state's rating structure. Seven of the nine states used a five-level rating structure and two states used four levels. Rating levels were not directly comparable across states, even among states with the same number of ratings, because states included different quality components and calculated the ratings differently (Kirby et al. 2017). The four-level rating structure only uses four of the categories: in this structure, 1 is the lowest level, 4 is the highest level, and 2 and 3 are the second lowest and second highest levels, respectively. There is no middle level in the four-level rating structure, because the exact middle of 1 and 4 is 2.5.

The standardized categories align the top two rating levels across the four- and five-level structures, following the most common and conservative definition of "top tiers" that RTT-ELC states used. In their grant reports, the majority of RTT-ELC states only included ratings in the top two levels (4 and 5 in the five-level structure and 3 and 4 in the four-level structure) in their "top tiers." These categories standardized the ratings as shown in the table below.

Standardized rating level category	Rating in four-level rating system	Rating in five-level rating system
Highest level	4	5
Second highest level	3	4
Middle level	n.a.	3
Second lowest level	2	2
Lowest level	1	1

n.a. = not applicable.

The analysis examined the percentage of programs that received each rating level category and the percentages in the two highest levels combined.

#### Averages across states

We present (1) averages for all states, states that had each characteristic or policy, and states that did not have this characteristic or policy, and (2) patterns for individual states. Because each state represents a separate implementation of a characteristic or policy, each state received the same weight in the averages. Supplemental analyses also calculate the median ratings for (1) programs within states and (2) all states, based on an average distribution where each state received the same weight.

For these analyses, we used the full population of programs, as opposed to a sample. Thus, any observed differences reflect actual differences, not estimates based on statistical tests.

#### Ratings at entry

To answer the first research question, we examined programs' ratings at entry. This analysis focuses on the 9,658 programs that entered TQRIS during the analysis period (2012 to 2016 for seven states and 2014 to 2016 for California and Ohio).

### Attainment of top ratings

To answer the second research question, we examined programs' attainment of top rating levels by 2016. To understand how programs reached these two highest levels, we examined whether they received these ratings at entry or through movement to highest rating levels. For programs that reached the highest levels before the analysis period began (2012 for seven states and 2014 for California and Ohio), we did not observe how they reached these levels (at entry or through movement). This analysis included 13,357 programs. Although this analysis focuses on programs' attainment of top rating levels, Appendix B shows the full distribution of programs' ratings by 2016 for each TQRIS characteristic or policy.

### Types of Participating Programs and TQRIS Policies

Understanding the different types of programs that participate in TQRIS and the characteristics and policies that states can select for the systems is essential for exploring patterns of ratings. Programs serve children of various age ranges from different income groups, and they differ on other characteristics that could affect their ratings. States' TQRIS characteristics may influence how all programs enter and move through the system. TQRIS policies often target certain types of programs to encourage them (especially those that serve low-income children) to participate in the rating system and earn higher ratings. Below we describe the program types, TQRIS characteristics, and TQRIS policies for the nine states. This brief focuses on just a few characteristics and policies, but understanding a more complete picture is necessary context for interpreting the patterns in ratings.

**Program types.** The landscape of center-based early learning and development programs that serve children ages 3 to 5 is quite diverse. Programs differ in the ages of children they serve and the degree to which they serve low-income or high-needs children (Table 1). State-funded pre-K and Head Start programs specifically target preschool-age children and fully, or predominantly, serve low-income children. Licensed centers can serve children from birth through age 12; in this study, we included only those that served preschool-age children (these programs might have also served infants, toddlers, and school-age children). Licensed centers that received child care subsidies served at least some low-income children; we could not determine from the data whether licensed centers that did not receive subsidies served low-income children. Other differences among programs include the type of setting (such as within a public school or a community-based organization), the type and source of their licensing or regulation, and the types of funding or revenue they receive.

Many programs receive funding from a mix of sources, so categorizing each program as a single type might not fully capture its nature. For example, a community-based center could have Head Start classrooms for children ages 3 to 5 and state-funded pre-K classrooms for 4-year-olds. It could also receive Child Care and Development Fund subsidies to support low-income children from birth to age 12 and receive full or partial tuition directly from parents. However, to explore patterns across programs and how TQRIS characteristics might influence them, we used assignment rules to create mutually exclusive program types (see Appendix A for details about program type assignments and Table A.1 for information on their licensing status and funding sources). We categorized programs into four types to mirror those typically found in the state RTT-ELC yearly reports: (1) state-funded pre-K programs, (2) Head Start programs, (3) licensed centers that received child care subsidy funding, and (4) licensed centers that did not receive any type of public funding.

Not all Head Start and state-funded pre-K programs must hold a license from the state child care licensing entity. However, these programs must follow standards set by the Federal Office of Head Start or state department of education, respectively. These standards include components of quality that are similar to those of TQRIS standards and often set requirements that are comparable to those for the highest TQRIS rating levels. For example, state-funded pre-K programs in the nine states require the use of early learning development standards and approved curricula (Barnett et al. 2017). Therefore, Head Start and state-funded pre-K programs could likely receive high ratings, even without policies that grant them credit for all or part of the TQRIS standards.

Type of program	Children served	Setting	Licensing or regulation	Public funding received
State-funded pre-K	All states serve 4-year- olds; 5 states also serve 3-year-olds Targeted to low-income children in 7 states	Community-based or public school settings	Regulated by state departments of education using state program standards  May be licensed in community-based settings or considered license-exempt when delivered in public school settings	State pre-K funds  May also have received Federal Head Start funds and child care subsidies
Head Start	Targeted to low-income children ages 3 to 5	Community-based or public school settings	Regulated by the Federal Office of Head Start using Head Start Program Performance Standards  May be licensed in community-based settings or considered license-exempt when delivered in public school settings	Federal Head Start funds.  May also have received state- pre-K funds and child care subsidies
Licensed centers, received subsidies	Range from birth to school-age (up to age 12) <sup>a</sup> Subsidies support lowincome children; may also serve children from higher-income levels	Community-based settings	Licensed by child care licensing entity in the state	Federal Child Care and Development Fund State-funded child care subsidies
Licensed centers, no subsidies	Range from birth to school-age (up to age 12) <sup>a</sup> May serve low-income children but data available on public funding sources do not indicate this	Community-based settings	Licensed by child care licensing entity in the state	None <sup>b</sup>

Source: Document reviews and telephone interviews conducted from December 2016 to January 2017.

TQRIS characteristics and policies. TQRIS first emerged in the late 1990s, expanded somewhat in the early 2000s, and flourished under RTT-ELC. By the end of 2017, 44 states had TQRIS (BUILD Initiative 2017). TQRIS rate early learning and development programs against state-defined quality standards that include components such as licensing compliance, quality of the learning environment, and qualifications of the workforce. Based on meeting the standards, programs receive an overall rating level intended to document variations in the quality of care that children receive. In the Round 1 RTT-ELC states, the overall rating ranged from 1 to 4 in two states and 1 to 5 in seven states.

The meaning of each rating level—what it measures and how—is not the same across states. States define TQRIS standards and rating levels differently (for more information about how the nine Round 1 RTT-ELC states defined rating levels, see the first report from this study, Kirby et al. 2017). For example, the nine Round 1 RTT-ELC states use anywhere from 6 to 12 components for their highest rating level. Even when multiple states use a particular TQRIS component (such as the quality of the learning environment), each state might differ in the rating level it assigns to

<sup>&</sup>lt;sup>a</sup> The analyses included only licensed centers that served preschool-age children.

<sup>&</sup>lt;sup>b</sup> Centers did not receive the public funding examined in this analysis including child care subsidies, Head Start, or state pre-K funds. RTT-ELC = Race to the Top-Early Learning Challenge.

programs with that component. The commonality across the states is that the higher the rating, the higher the level of quality of the program based on the state's TQRIS standards.

States also differ in the combinations of characteristics and policies that they define for their systems, which could influence programs' participation, the ratings they receive at entry, and whether they attained the top levels by 2016. The nine Round 1 RTT-ELC states varied widely in how they chose to structure their TQRIS. These nine states are not representative of all TQRIS, but they do reflect the wide variation in characteristics and policies that exists across the 44 current TQRIS (BUILD Initiative 2017).<sup>2</sup>

**TQRIS characteristics.** We focus on two characteristics of TQRIS that could influence the frequency and ease with which programs can achieve higher ratings (Table 2):

- Length of implementation. A state TQRIS needs about two to four years, on average, to achieve a steady state of implementation in which the policies, practices, and supports are in place and running smoothly (Metz and Bartley 2012). Mature systems might have moreestablished policies that aim to encourage and support movement through the ratings. At the beginning of the study period in 2012, four states had implemented TQRIS statewide for two years or more. North Carolina had the longest-running TQRIS, which it adopted in 1999. Other states expanded or launched TQRIS closer to the start of the RTT-ELC grants. Two of the nine states expanded TQRIS from a pilot to statewide at the start of RTT-ELC in 2012 and two others first launched TQRIS concurrently with RTT-ELC.
- Rating structure. TQRIS use one of three structures to determine a program's rating level: building block, points, and hybrid structures (Figure 1). Six states use points and hybrid structures, which can provide programs with flexibility in demonstrating quality because they offer multiple ways to earn a higher rating. These structures might promote more movement of programs up the rating levels than building block structures, which require programs to meet all standards of a given rating.

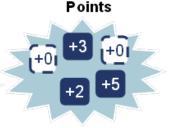
Table 2. TQRIS c	haracteristics in RTT-ELC Round	1 states	
	Characteristics includ	Additional characteristic for context	
State	Length of TQRIS implementation in 2012	Rating structure <sup>a</sup>	Validity period for ratings
California	First year	Points	2 years
Delaware	4 years	Hybrid	1–3 years by rating level
Maryland	Did not start until 2013	Block	1 year
Massachusetts	1 year	Block	2 years
Minnesota	First year	Hybrid	2 years
North Carolina	13 years	Points	3 years
Ohio	6 years	Hybrid	1–3 years by rating level
Rhode Island	3 years	Block	3 years
Washington	First year	Hybrid	3 years

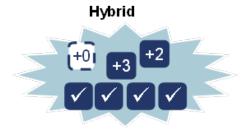
Source: Telephone interviews conducted by Mathematica, October 2014-April 2015 and December 2016-January 2017.

<sup>&</sup>lt;sup>a</sup> Rating structure applies to levels beyond the lowest level. All TQRIS have a block structure for the lowest level that requires programs to meet all licensing requirements and sometimes additional components.

Figure 1. Rating structures in TQRIS







Programs must meet all standards in a level to receive that rating.

Programs earn **points** for meeting standards. The total number of points determines the rating.

Programs are rated by a building-block structure in some levels (usually, lower levels) and a points structure in others (usually, higher ones).

To provide additional context for the findings, we discuss one other characteristic of the systems that may also affect movement: the validity period for ratings. Depending on the state (and sometimes the rating level), ratings are valid from one to three years, and then programs must reapply for a rating. States' decisions about how often programs must reapply for a rating could contribute to the frequency of changes in ratings.

**TQRIS** policies. The nine states developed policies to attempt to encourage TQRIS participation among different types of programs and support ratings improvement (Table 3). This brief focuses on four policies:

• Alternative pathways or automatic ratings. Six states aimed to encourage participation by awarding credit (known as offering an alternative pathway) for certain quality components (five states) or automatically awarding higher rating levels (one state) to programs that met quality standards external to the TQRIS (for example, state-funded pre-K and Head Start programs). These policies exempt eligible programs from part or all of the TQRIS rating process in an effort to decrease the burden on programs that must meet multiple sets of standards. Some states have these policies for one type of program but not others. For example, Massachusetts offers alternative pathways to Head Start programs but not state-funded pre-K programs.

These policies could result in programs entering the TQRIS at higher rating levels than they would have qualified for based on the TQRIS standards. When developing these types of policies, states often complete a crosswalk between other external quality standards and the TQRIS standards to establish comparability. However, the specific degree of equivalence between the relevant external standards and TQRIS standards is not fully known; equivalence can more readily be established for specific components used in alternative pathways than for a full set of components that automatically qualifies a program for a high rating level.

		Policies i	ncluded in analysis		Additional policies for context		
State	Alternative pathways	Automatic rating	Entry requirement at lowest rating level	Tiered reimbursement payments for children receiving subsidies	Participation requirements	Rating level funding requirement	
California	None	None	None	None	None	None	
Delaware	None	Head Start, state-funded pre-K	Licensed centers that received subsidies Licensed centers with no subsidies	Any program receiving subsidies for low-income children	State-funded pre- K	None	
Maryland	State-funded pre-K (school- based only) <sup>a</sup>	None	None	Any program receiving subsidies for low-income children	Licensed centers receiving subsidies, state-funded pre- K	State-funded pre K <sup>a</sup>	
Massachusetts Head Start Nor		None	Licensed centers that received subsidies Licensed centers with no subsidies	None	Licensed centers receiving subsidies, Head Start, state-funded pre- K	State-funded pre- K	
Minnesota Head Start, None state-funded pre-K		None	None	Any program receiving subsidies for low-income children	None	None	
North Carolina	None	None	All participating programs	Any program receiving subsidies for low-income children	All licensed programs; includes both types of licensed centers and may include Head Start and statefunded pre-K programs in licensed settings	Licensed centers receiving subsidies, state-funded pre- K	
Ohio	None	None	None	Any program receiving subsidies for low-income children	Licensed centers receiving subsidies, state- funded pre-K	None	
Rhode Island Head Start None		None	Any program receiving subsidies for low-income children	Licensed centers receiving subsidies, state-funded pre- K	None		
Washington	Head Start, state-funded pre-K	None	Licensed centers that received subsidies Licensed centers with no subsidies	Any program receiving subsidies for low-income children	State-funded pre- K	None	

Source: Telephone interviews conducted by Mathematica, October 2014-April 2015 and December 2016-January 2017.

Note: Cells that say "None" indicate states that did not have the policy. All other cells are shaded.

• **Tiered reimbursement for child care subsidies.** Seven states offered higher payments to subsidize serving low-income children if the programs participated in TQRIS. The payments also increased with each rating level.<sup>3</sup> The tiered rates might also have promoted programs' advancement, particularly among licensed centers that received subsidies.

<sup>&</sup>lt;sup>a</sup> These policies took effect in the middle of 2015 in Maryland.

To provide additional context for the findings, we discuss two additional policies that could have affected programs' participation and ratings:

- Participation requirements. Seven states required certain types of programs (for example, those that received public funding like state-funded pre-K programs, Head Start programs, or licensed centers that received child care subsidies) to participate in the TQRIS. Participation of licensed centers that did not receive public funding was voluntary in every state but North Carolina, which required all licensed programs to participate in the TQRIS.
- Rating level funding requirement. In three states, programs had to attain a certain rating level to be eligible for specific types of funding. For example, a program in North Carolina must have attained a level 3 rating to receive child care subsidies from the Child Care and Development Fund or a level 4 rating to receive state pre-K funds. These policies could have also incentivized particular programs to attain certain ratings at TQRIS entry.

In addition to these policies, states could try to promote quality improvement by publicizing TQRIS ratings. This study did not collect systematic data on how states publicized ratings that could be used to interpret the patterns of ratings at entry and attainment of the highest rating levels.

Below we discuss the patterns in TQRIS participation and ratings among programs in the nine Round 1 states during the RTT-ELC grant period. Throughout the findings, it is important to keep the following caveats in mind:

- Rating levels do not reflect a uniform level of quality. Because states use different quality components and calculate rating levels differently, programs that receive a particular rating level might vary substantially in quality across states, even among states that use the same number of rating levels. In addition, within states, programs might achieve rating levels in different ways, weakening the link between the levels and certain measures of quality. For example, building block rating structures require programs to meet all standards within a level to receive a rating. In these structures, a program that missed qualifying for the next level based on a single standard might not be that different in quality from programs at the next level. In points and hybrid structures, programs that receive a given rating level could have met different standards, as long as they received enough points.
- Rating levels might not reflect programs' "true" quality. States use various data collection and verification processes to help ensure the reliability of the rating levels, but ratings could differ from programs' "true" quality for several reasons. First, some states use alternative pathways or automatic ratings, which exempt programs that meet external quality standards from part or all of the TQRIS rating process. It is not fully known whether these programs would meet the state-defined standards. Second, some states require programs to enter at the lowest level, instead of the level to which they would have qualified. In these states, ratings might initially understate some programs' "true" quality. Overqualified programs could move up without improving quality, resulting in movement that does not reflect increased quality. Finally, programs could make quality improvements without applying for higher ratings; this could cause ratings to understate programs' quality.
- The findings do not provide evidence that particular policies or program types caused the observed patterns in participation and ratings. Throughout the findings, we discuss the TQRIS characteristics and policies that might influence the patterns we present, but this

study is purely descriptive. The nine Round 1 states differ on many TQRIS characteristics and policies as well as on other dimensions, such as the characteristics of families seeking child care, the way in which TQRIS publicize the ratings to families, the composition of the early learning and development landscape, and the presence of other quality initiatives beyond TQRIS. Therefore, although we discuss several potential explanations for the patterns we present, other potential explanations might exist for these observed patterns. This brief does not describe all of the differences across the states that might have contributed to differences in the patterns of program participation or ratings that we present.

Nonetheless, the findings from this brief could help provide a starting point for further discussion and research related to the TQRIS characteristics and policies that it describes. As the number of all types of programs participating in TQRIS continues to increase, it is of growing importance for states to consider how different TQRIS characteristics and policies may affect programs' ratings, and, importantly, support an accurate rating of quality.

### **Findings**

### A. Research Question 1: What were the patterns in rating levels at TQRIS entry across states with different rating level policies?

States use different policies to try to promote TQRIS entry among particular types of programs or ensure that programs meet initial requirements. However, these policies might channel programs toward ratings at entry that could differ from those they would have received on the TQRIS standards, potentially reducing the accuracy of programs' ratings as measures of program quality. For example, alternative pathways and automatic ratings could fast-track state-funded pre-K and Head Start programs toward higher ratings, whereas entry-level requirements could push licensed centers to enter at the lowest rating level.

These rating level policies might be a potential explanation for why state-funded pre-K and Head Start programs typically entered at one of the top two rating levels in RTT-ELC states, whereas licensed centers that did and did not receive subsides typically entered at one of the bottom two rating levels (Figure 2). Yet, if the patterns of high and low ratings for each program type persist even in states without the rating level policies, then these differences between ratings of each program type might simply reflect differences in whether these types of programs meet states' standards.

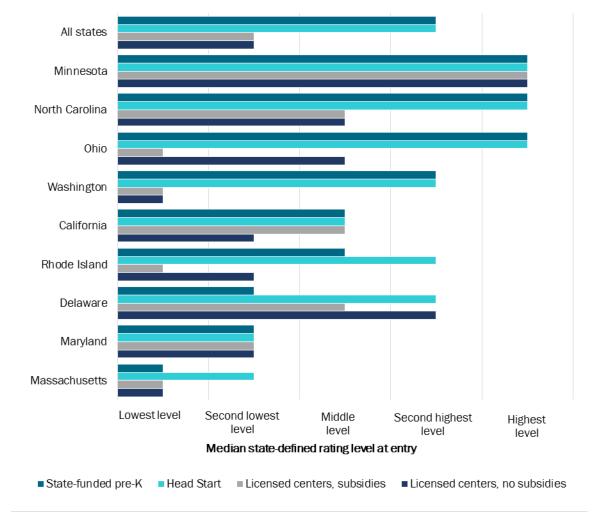


Figure 2. Median TQRIS rating levels at entry, by program type and state, 2012–2016

Note: The total number of programs was 9,658. Analysis included only programs that entered from 2012 to 2016. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The figure omits data from California and Ohio before 2014: data were not available from California before 2014 and, due to significant system changes in Ohio in late 2013, the analysis included data only from 2014 to 2016. The median across states is calculated at the state level (rather than center level) so that states are weighted equally.

Figure reads: In Massachusetts, the median entry rating level for state-funded pre-K programs, licensed centers receiving subsidies, and licensed centers not receiving subsidies was the lowest level. The median entry rating level for Head Start programs was the second lowest level.

pre-K = prekindergarten; RTT-ELC = Race to the Top-Early Learning Challenge; TQRIS = tiered quality rating and improvement systems.

### 1. Patterns for state-funded pre-K and Head Start programs, by whether states offered them alternative pathways or automatic ratings

Alternative pathways and alternative rating policies aim to exempt state-funded pre-K and Head Start programs from the burden of the full rating process, under the theory that they would likely meet state TQRIS standards. Similarly, high ratings for these programs, in both states with and without these policies, could suggest that the external standards for these programs and states' TQRIS standards align well, potentially supporting the use of these policies.

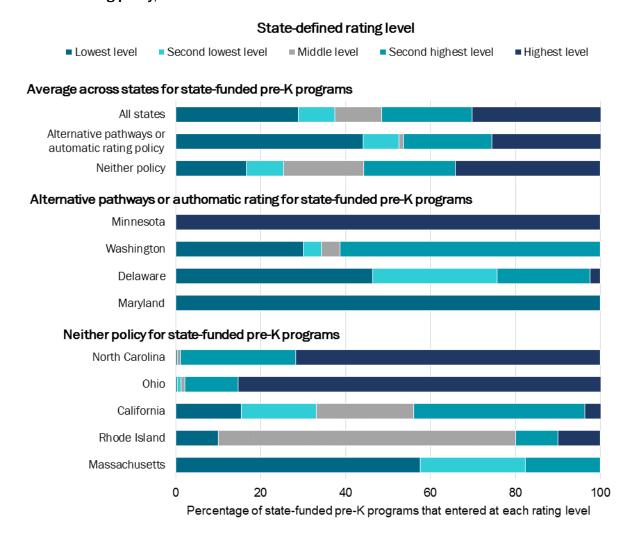
State-funded pre-K programs did not enter at higher rating levels in states with alternative pathways or automatic ratings than in states without these policies. About half of state-funded pre-K programs entered at the top two rating levels in both groups of states, though programs had lower ratings in states with alternative pathways or automatic ratings than in states without these policies (47 versus 56 percent; Figure 3, two bars closest to the right). The percentages of state-funded pre-K programs that entered at each rating level varied substantially across individual states, both among those with the rating level policies and those without.

Among the four states that had an alternative pathway or automatic rating, two—Minnesota and Washington—had the majority of their state-funded pre-K programs enter at the highest or second highest rating level. Differences in how alternative pathways or automatic ratings are applied might help to explain why some state-funded programs in states with these policies did not enter the TQRIS in the highest rating levels. In Washington, the alternative pathway applied only to programs that met a threshold in the percentage of children (75 percent) served through state pre-K funds. Some state-funded pre-K programs might not have met this threshold and would not have been eligible for the alternative pathway. In Delaware, the alternative pathway did not apply to certain state-funded pre-K programs (those that operate in public schools), and these school-based programs typically entered the TQRIS at the lowest level. In contrast, in Maryland, the alternative pathway applied only to school-based state-funded pre-K programs, but none of these types of programs entered its TQRIS during the study period.

Among the five states that did not have an alternative pathway or automatic rating, two—North Carolina and Ohio—had nearly all of their state-funded pre-K programs enter in the top two rating levels. This might reflect similarities between TQRIS standards and those of these states' pre-K program in terms of how they define quality. TQRIS standards may not be well-aligned with state pre-K standards in the other three states, which had fewer state-funded pre-K programs entering at the top rating levels.

States can also apply alternative pathways and automatic ratings to Head Start programs, which also tend to enter TQRIS in one of the top rating levels. Minnesota, Washington, and Delaware offered alternative pathways and automatic ratings to both state-funded pre-K and Head Start programs, but Maryland, Rhode Island, and Massachusetts offered them to only one of these program types.

Figure 3. Distribution of state-funded pre-K programs' ratings at entry, by alternative pathways or automatic rating policy, 2012–2016



Note: The total number of programs was 2,669. Analysis included only programs that entered from 2012 to 2016. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The figure omits data from California and Ohio before 2014: data were not available from California before 2014 and, due to significant system changes in Ohio in late 2013, the analysis included data only from 2014 to 2016.

Figure reads: In Massachusetts, which did not have either an alternative pathway or automatic rating for its state-funded pre-K programs, 57 percent of these programs entered at the lowest level, 25 percent at the second lowest level, 0 percent at the middle level, 18 percent at the second highest level, and 0 percent at the highest level.

RTT-ELC = Race to the Top-Early Learning Challenge; TQRIS = tiered quality rating and improvement systems. Seven of the nine states required at least some types of programs to participate, which might have contributed to increased participation over time. For example, Rhode Island required programs that received Child Care and Development Fund subsidies to participate in TQRIS beginning in 2014. In that year, many licensed centers that received subsidies entered the system, increasing TQRIS participation by over 50 percentage points.

Head Start programs did not consistently enter at higher rating levels in states that offered them alternative pathways or automatic ratings than in states that did not. More than half of Head Start programs entered at the top two rating levels in both groups of states, with some differences in the average percentages across the two groups (Figure 4). States that had alternative pathways or automatic ratings had higher percentages of Head Start programs entering at the top two rating levels (65 versus 53 percent), but lower percentages entering at the top level (26 versus 34 percent), than states without these policies. The percentages of Head Start programs that attained top rating levels varied substantially across individual states. Most Head Start programs entered in one of the top two rating levels in most states—four of the five states with these rating level policies and two of the four states without the policies.

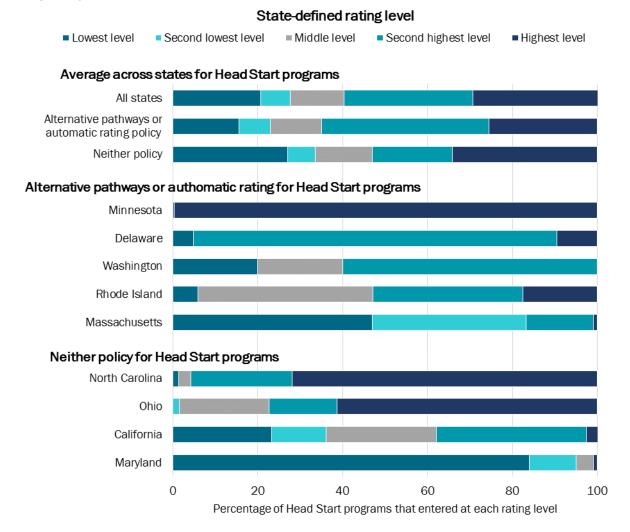
The different patterns in ratings at entry among states that had alternative pathways or automatic ratings might be related to variation in how Head Start programs could earn credit toward higher ratings. For example, in Minnesota, Head Start programs (similar to state-funded pre-K programs) were fast-tracked into the highest level by meeting a streamlined set of standards rather than going through the full TQRIS rating process. Programs had to demonstrate use of an approved curriculum and child assessment tool and deliver training to lead teachers on how to use them (Kirby et al. 2017). In contrast, Head Start programs in Massachusetts received credit toward several rating criteria but this credit did not meet the full requirements for any level, including the lowest one. Similarly, in Rhode Island, Head Start programs received a top rating on 3 of the 10 standards in curriculum, assessment, and family communication and involvement, but this did not guarantee an overall rating at the highest levels.

States that had automatic ratings or alternative pathways for both state-funded pre-K and Head Start programs also varied in how consistently they applied the policies to the different program types. For example, Delaware applied the automatic rating more uniformly to Head Start programs than state-funded pre-K programs. All of Delaware's Head Start programs were eligible for an automatic rating at the state's second highest level; 86 percent entered at that level and an additional 10 percent entered at the highest level. In contrast, Washington applied the same eligibility threshold (75 percent of children supported by a given type of fund) for an alternative pathway to both Head Start and state-funded pre-K programs.

In states without alternative pathways or automatic ratings, the different patterns in the level of entry among Head Start programs might reflect differences in the alignment of TQRIS and Head Start standards. Similar to their state-funded pre-K programs, North Carolina and Ohio might have a higher degree of alignment between these standards than other states where fewer Head Start programs entered at high rating levels.

Taken together, these findings suggest that alternative pathways or automatic ratings might not play a substantial role in channeling state-funded pre-K or Head Start programs toward high ratings. These policies are not consistently applied to programs within states. In addition, some states without these policies, such as North Carolina and Ohio, had nearly all of their state-funded pre-K and Head Start programs enter in top rating levels, suggesting that, at least in some states, standards for these programs and TQRIS might be relatively well aligned.

Figure 4. Distribution of Head Start programs' ratings at entry, by alternative pathways or automatic rating policy, 2012–2016



Note: The total number of programs was 935. Analysis included only programs that entered from 2012 to 2016. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The figure omits data from California and Ohio before 2014: data were not available from California before 2014 and, due to significant system changes in Ohio in late 2013, the analysis included data only from 2014 to 2016.

Figure reads: In Maryland, which did not have either an alternative pathway or automatic rating for its Head Start programs, 84 percent of its programs entered at the lowest level, 11 percent entered at the second lowest level, 4 percent entered at the middle level, 0 percent entered at the second highest rating level, and 1 percent entered at the highest rating level.

### 2. Patterns for licensed centers that did and did not receive subsidies, by whether states required these programs to enter at the lowest rating level

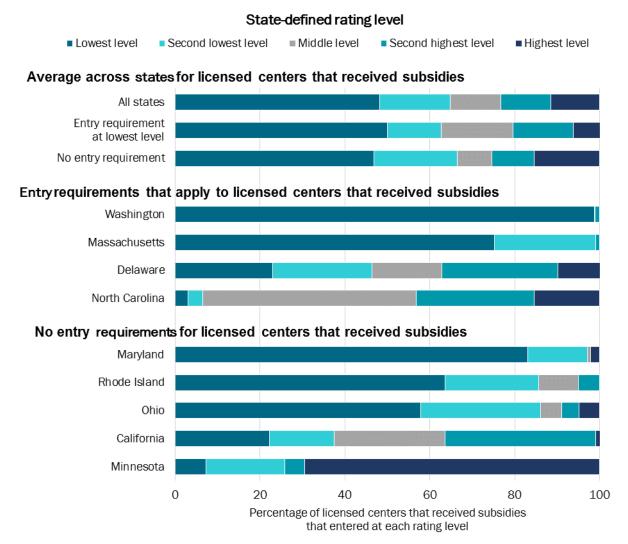
A separate rating level policy—required entry at the lowest rating level—could push both types of licensed centers toward the lowest rating level at entry. Low ratings for these programs, both in states with and without these requirements, could suggest that these types of licensed centers are not meeting state TQRIS standards and have ample room to improve.

Similar percentages of licensed centers that received subsidies entered at the lowest rating level in states that required them to do so as in states that did not. There was little difference between states that had an entry level requirement and those that did not in the percentages of licensed centers that received subsidies entering at the lowest level (50 versus 47 percent, Figure 5, bar furthest to the left).

In two of the four states with the entry level requirements—Washington and Massachusetts—a majority of licensed centers that received subsidies entered at the lowest rating level. Differences in implementation could help to explain why some states with this requirement had fewer programs enter at the lowest rating level than might be expected. For example, although Delaware and North Carolina required licensed centers that received subsidies to enter the TQRIS at the lowest level, the first recorded ratings were often not at the lowest level, suggesting that movement out of the lowest level might have happened quickly. These two states did not require programs to move through the rating levels sequentially, so programs could advance to higher ratings quickly. North Carolina also had another policy in place that might have counteracted the entry level requirement for centers that received subsidies; licensed centers that wanted to receive subsidies were required to attain North Carolina's middle-level rating to be eligible for the subsidy. In fact, 50 percent of licensed centers that received subsidies in North Carolina had first recorded ratings at the middle level (and thus appear to enter at that level).

States without these entry level requirements also frequently had high percentages of licensed centers that received subsidies entering at the lowest rating level. For example, in three of the five states that did not require these programs to enter at the lowest level—Maryland, Rhode Island, and Ohio—a majority of them entered there anyway. The low ratings for licensed centers that received subsidies on these states' TQRIS standards suggests that these types of programs might have substantial room for improvement. Minnesota, which did not have this requirement, was the only state in which more than half of licensed centers that received subsidies entered the TQRIS at the two highest levels.

Figure 5. Distribution of ratings at entry for licensed centers that received subsidies, by entry requirement at lowest level, 2012–2016



Note: The total number of programs was 4,421. Analysis included only programs that entered from 2012 to 2016. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The figure omits data from California and Ohio before 2014: data were not available from California before 2014 and, due to significant system changes in Ohio in late 2013, the analysis included data only from 2014 to 2016.

Figure reads: In Minnesota, which did not require licensed centers that received subsidies to enter at the lowest rating level, 7 percent of these centers entered at the lowest level, 18 percent at the second lowest level, 0 percent at the middle level, 5 percent at the second highest level, and 70 percent at the highest level.

Higher percentages of licensed centers that did not receive subsidies entered at the lowest rating level in states that required them to do so than in states that did not. States with the entry requirement had higher percentages of licensed centers that did not receive subsidies entering at the lowest rating level than states without this requirement (56 versus 38 percent, Figure 6).

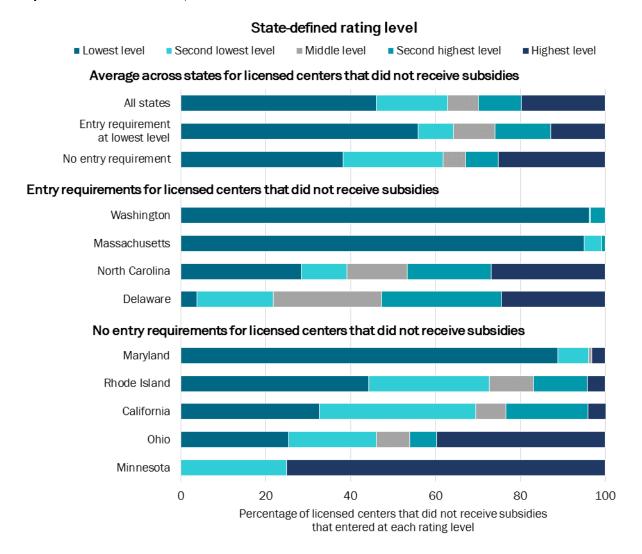
In states with an entry requirement, the percentages of this program type that entered at the lowest rating level ranged from 96 percent in Washington to 4 percent in Delaware. In North Carolina and Delaware, similar to licensed centers that received subsidies, licensed centers that did not receive subsidies might have moved out of the lowest level quickly.

In states that did not have an entry requirement, the percentage of licensed centers that did not receive subsidies that entered at the lowest level ranged from 89 percent in Maryland to zero in Minnesota. In Rhode Island, Ohio, and Minnesota, licensed centers that did not receive subsidies actually entered at higher rating levels than those that received subsidies, which might help drive the differences in findings across the two types of programs.

Thus, requiring entry at the lowest rating level had some association with the entry ratings of licensed centers that did not receive subsidies but no association for licensed centers that received subsidies. This could suggest the need to examine whether entry level requirements hold licensed centers, particularly those that do not receive subsidies, at lower rating levels than they might have received based on the standards.

The differences across rating levels at entry for the four types of programs, combined with differences across states in the composition of programs that participate in TQRIS, might contribute, in part, to differences in patterns of ratings across states. For example, in California and Minnesota, state-funded pre-K programs—which tended to receive high ratings—comprise the majority of programs that participate in TQRIS (Appendix B, Figure B.1). In contrast, in the other seven states, licensed centers that receive subsidies—which tend to receive lower ratings—are in the majority. The next section focuses on several other key TQRIS characteristics and policies that could partially influence differences in ratings across states.

Figure 6. Distribution of ratings at entry for licensed centers that did not receive subsidies, by entry requirement at lowest level, 2012–2016



Note: The total number of programs was 1,633. Analysis included only programs that entered from 2012 to 2016. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The figure omits data from California and Ohio before 2014: data were not available from California before 2014 and, due to significant system changes in Ohio in late 2013, the analysis included data only from 2014 to 2016.

Figure reads: In Minnesota, which did not have an entry level requirement for licensed centers that did not receive subsidies, 25 percent of programs entered at the second lowest level, compared with 75 percent for the highest rating level.

## B. Research Question 2: What were the patterns in programs' attainment of the top two rating levels by 2016 across states with different TQRIS characteristics and policies?

The percentages of programs that attained the top two rating levels by 2016 varied dramatically across states (Figure 7). Two states—Minnesota and North Carolina—had more than 75 percent of programs at the top rating levels. Minnesota had the majority of its programs receiving these ratings at entry through alternative pathways, and North Carolina, which had the longest-running TQRIS, had most of its programs achieving these rating levels before the beginning of the study period. In contrast, the four states with less than 25 percent of programs achieving the top rating levels—Rhode Island, Massachusetts, Washington, and Maryland—had either newer TQRIS or block rating structures.

Thus, states differed on multiple TQRIS characteristics and policies, as well as other dimensions that could be associated with these differences in programs' ratings. Key differences include the length of TQRIS implementation, rating structure, and offer of tiered subsidy reimbursement rates. Differences in ratings between states that have each of these characteristics or policies and those that do not could provide evidence about the potential relationships between these characteristics or policies and programs' ratings.

To examine differences in ratings, we focus on programs attaining the top two rating levels by 2016, the end of the RTT-ELC grant period. However, findings are similar for the full distribution of ratings by that year. (See Appendix B, Figures B.2 to B.4, for the ratings distributions for the two characteristics and one policy examined.)

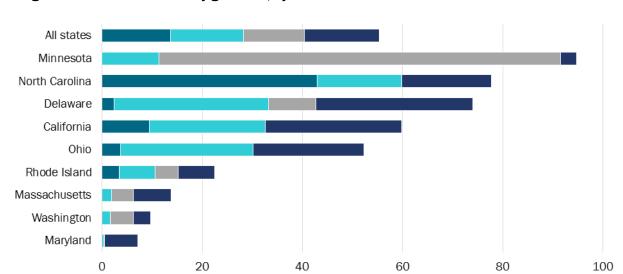


Figure 7. Percentages of programs that achieved the highest or second highest state-defined TQRIS rating level in 2016 and how they got there, by state

Percentage of programs that achieved the highest or second highest state-defined rating level

- Achieved by start of analysis period
- Achieved at entry, not eligible for automatic rating or alternative pathway
- Achieved at entry, eligible for automatic rating or alternative pathway
- Achieved through movement up

Source: Administrative data collected from Round 1 RTT-ELC states from October 2016 to April 2017.

Note:

The total number of programs was 13,357. Analysis was based on all programs that achieved the highest or second highest rating level in each state in 2016. "Achieved by start of analysis period" includes programs that were at the highest or second highest rating at the beginning of the study period (in 2014 for California and Ohio and in 2012 for the other seven states) and for which we cannot determine whether they had achieved those levels at entry. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide.

Figure reads: Twenty-two percent of all programs that participated in TQRIS in 2016 in Rhode Island were at the highest or second-highest rating level; 3 percent of programs received the highest or second highest rating by the start of the analysis period, 7 percent of programs were not eligible for an automatic or alternate pathway and received the highest or second highest rating level at entry, 5 percent were eligible for one of these policies and received the highest or second highest rating level at entry, and an additional 7 percent achieved the highest level through upward movement.

### 1. Patterns for all programs, by length of implementation

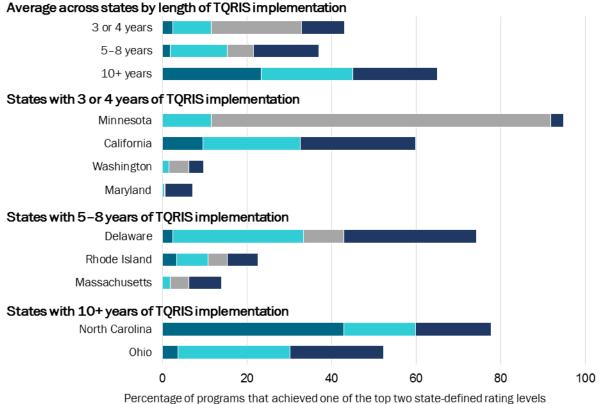
At the start of the RTT-ELC grants, some states—California, Maryland, Minnesota,<sup>4</sup> and Washington—were just launching their TQRIS, but other states had implemented their TQRIS for longer. For example, North Carolina had the longest running TQRIS, which had been in place since 1999, followed by Ohio, which implemented its TQRIS in 2006.

In states that had implemented TQRIS for longer, programs might have had more time to improve, and states might have had more time to develop and implement other policies that aim to support program improvement. As a result, programs in states with more established TQRIS might have had higher ratings by the end of the grant period.

States that had implemented statewide TQRIS for 10 or more years by 2016 had a higher percentage of programs in the top two rating levels than other states. In the two states with long-established statewide TQRIS of 10 or more years by 2016—North Carolina and Ohio—more than 50 percent of programs achieved one of the top two rating levels (Figure 8). States with TQRIS that had operated statewide for fewer than 10 years by 2016 had lower percentages of programs reaching the top levels, but these percentages varied substantially across states.

Three states that had implemented TQRIS for fewer than 10 years by 2016—Minnesota, California, and Delaware—had similar or higher percentages of top rated programs as North Carolina and Ohio. This could be due, in part, to the percentages of programs in these states that attained these ratings at entry. In Minnesota, 80 percent of programs that were at the highest state-defined levels in 2016 achieved those levels at entry and were eligible for an alternative pathway. In California and Delaware, a majority of programs had achieved one of the top rating levels by 2016 through a combination of high ratings at entry or ratings improvement that was not related to an alternative pathway or automatic rating. Minnesota and Delaware had also begun their TQRIS pilots as early as 2007, so programs from the pilot counties might have had nearly 10 years to improve their ratings. However, of these two states, only Delaware had a substantial percentage of its programs at the top rating levels that had achieved these ratings at the start of the study period or through movement up.

Figure 8. Percentages of programs that achieved the highest or second highest state-defined TQRIS rating level in 2016 and how they got there, by length of TQRIS implementation



- Achieved by start of analysis period
- Achieved at entry, not eligible for automatic rating or alternative pathway
- Achieved at entry, eligible for automatic rating or alternative pathway
- Achieved through movement up

The total number of programs was 13,357. Analysis was based on all programs that achieved the highest or second highest Note: rating level in each state in 2016. "Achieved by start of analysis period" includes programs that we first observed at the highest or second highest rating (in 2014 for California and Ohio and in 2012 for the other seven states) and for which we cannot determine whether they had achieved those levels at entry. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The averages across states in the first three bars are calculated at the state level (rather than center level) so that states are weighted equally for each average.

Figure reads: In North Carolina, which implemented TQRIS 10 or more years ago, 43 percent of programs achieved one of the top two rating levels by start of analysis period, 17 percent achieved one of the top two ratings at entry and were not eligible for automatic rating or alternative pathway, 0 percent achieved one of the top two ratings at entry and were eligible for automatic rating or alternative pathway, and 18 percent achieved one of the top two ratings through movement up.

### 2. Patterns for all programs, by rating structure

States use one of three rating structures to determine programs' ratings: building block, points, or hybrid. Points and hybrid rating structures might promote more movement than building block structures because they provide programs different avenues to meet the standards for each rating level. For example, they might allow a program to earn enough total points for a high rating by earning many points on one standard and few on another (such as earning more points toward curriculum and assessment standards and fewer toward staff qualifications standards). In contrast, building block structures require programs to meet minimums for each standard. A program rated using a building block structure might not receive a top rating level because it fails to meet just one standard, even if it meets or exceeds the minimums for all of the other standards. Simulation studies have found that building block rating structures can hold programs at lower rating levels, whereas the same programs could qualify for higher levels under a points or hybrid structure (Isner et al. 2012; Tout et al. 2014).

Substantially lower percentages of programs achieved top rating levels in states with building block rating structures than in states with hybrid or points rating structures. On average, less than 20 percent of programs attained top rating levels by 2016 in states with a building block rating structure, compared with more than 50 percent for points or hybrid rating structures (Figure 9).

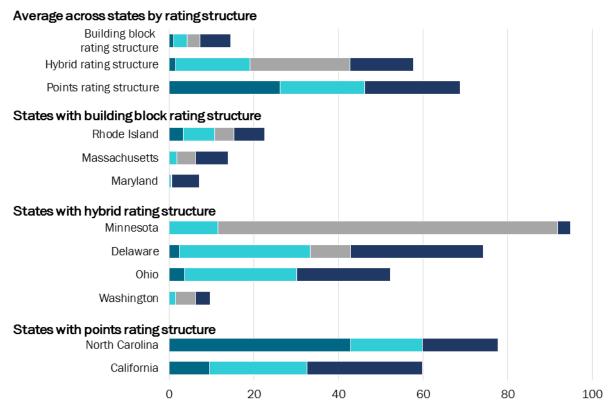
In all three states that had a building block rating structure—Maryland, Massachusetts, and Rhode Island—fewer than one-quarter of programs had achieved one of the top two rating levels by 2016. About 7 percent of programs in each of the three states achieved these levels through movement up.

The four states with hybrid rating structures varied widely in the percentage of programs that achieved one of the top two state-defined rating levels in 2016—from 10 percent in Washington to 95 percent in Minnesota. The ways in which programs achieved the top levels in each of these four states also varied. Both Delaware and Ohio had more than 20 percent of programs that achieved one of the two highest rating levels by 2016 through ratings improvement. The vast majority of programs in Minnesota achieved these rating levels at entry through alternative pathways.

Both states with points rating structures—California and North Carolina—had a high percentage of top-rated programs in 2016 (60 and 78 percent, respectively). Both states had substantial percentages of programs that achieved top rating levels through movement up the ratings.

These findings are consistent with the hypothesis that points and hybrid rating structures could promote more movement than building block rating structures. However, there are other potential explanations for these findings, including the fact that the three states with building block rating structures were relatively early in their implementation of TQRIS. Massachusetts, which began its TQRIS in 2011, did not begin granting the second highest and highest rating levels until 2014.

Figure 9. Percentages of programs that achieved the highest or second highest state-defined TQRIS rating level in 2016 and how they got there, by rating structure



Percentage of programs that achieved one of the top two state-defined rating levels

- Achieved by start of analysis period
- Achieved at entry, not eligible for automatic rating or alternative pathway
- Achieved at entry, eligible for automatic rating or alternative pathway
- Achieved through movement up

Source: Administrative data collected from Round 1 RTT-ELC states from October 2016 to April 2017.

Note: The total number of programs was 13,357. Analysis was based on all programs that achieved the highest or second highest rating level in each state in 2016. "Achieved by start of analysis period" includes programs that we first observed at the highest or second highest rating (in 2014 for California and Ohio and in 2012 for the other seven states) and for which we cannot determine whether they had achieved those levels at entry. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The averages across states in the first three bars are calculated at the state level (rather than center level) so that states are weighted equally for each average.

Figure reads: In North Carolina, which uses a points rating structure, 43 percent of programs achieved one of the top two rating levels by start of analysis period, 17 percent achieved one of the top two ratings at entry and were not eligible for automatic rating or alternative pathway, 0 percent achieved one of the top two ratings at entry and were eligible for automatic rating or alternative pathway, and 18 percent achieved one of the top two ratings through movement up.

### 3. Patterns for licensed centers that received subsidies, by whether states offered tiered reimbursement rates

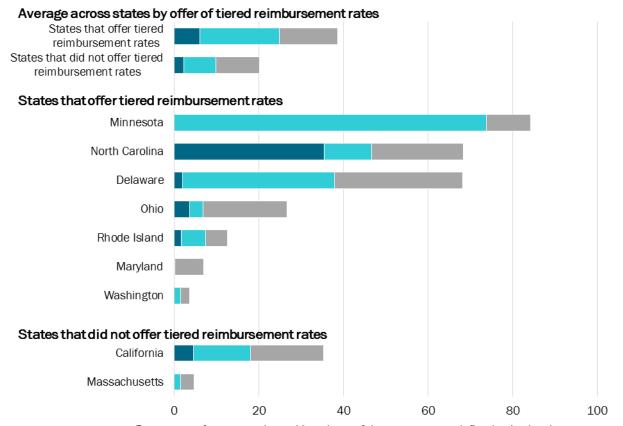
Seven of the nine RTT-ELC Round 1 states offer a tiered reimbursement rate to supplement the rate at which public funding covered the costs of providing care to children from low-income households. These states offer a higher subsidy rate for programs that achieve a minimum TQRIS rating, or require a minimum rating, typically the middle level, to qualify for the subsidy at all. The states then offer an increasingly higher subsidy rate—or tiered rate—as centers move up to higher state-defined TQRIS levels above the minimum required. States can structure their tiered reimbursement rates differently to encourage a variety of outcomes, such as encouraging programs to participate in a TQRIS, serve children from low-income households, or improve quality. These tiered rates could potentially motivate movement up the TQRIS rating levels among licensed centers that receive these subsidies.

Tiered reimbursement rates were associated with higher percentages of licensed centers that received subsidies achieving top rating levels by 2016, but states with tiered reimbursement rates had higher ratings for all types of programs, even those that did not receive this financial incentive. On average, 39 percent of licensed centers that received subsidies achieved top two rating levels in states that offered a tiered reimbursement rate, compared with 20 percent for other states (Figure 10).

Patterns of achieving the top two rating levels varied widely in states that offered tiered reimbursement rates and those that did not. Among states that offered tiered reimbursement rates, the percentage ranged from 4 percent in Washington to 84 percent in Minnesota. The two states that did not offer tiered reimbursement rates—California and Massachusetts—had 35 and 5 percent of licensed centers that received subsidies achieving top rating levels by 2016.

However, states that offered tiered reimbursement rates had higher ratings for all types of programs, even those that did not receive this financial incentive. For example, licensed centers that did not receive subsidies also had higher median ratings in states with tiered reimbursement rates than in other states (Figure 11). Thus, variations in states' many other different TQRIS characteristics and policies might mask associations between this financial incentive and ratings.

Figure 10. Percentages of licensed centers receiving subsidies that achieved the highest or secondhighest state-defined TQRIS rating level in 2016 and how they got there, by offer of tiered reimbursement rates



Percentage of programs that achieved one of the top two state-defined rating levels

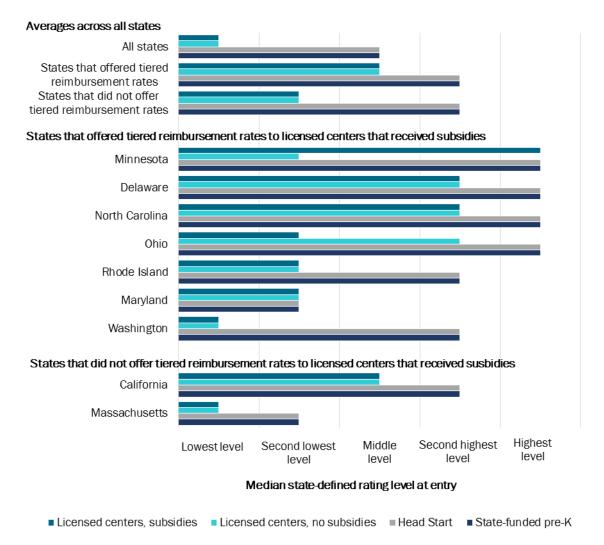
- Achieved by start of analysis period
- Achieved at entry, not eligible for automatic rating or alternative pathway
- Achieved through movement up

Source: Administrative data collected from Round 1 RTT-ELC states from October 2016 to April 2017.

Note: The total number of programs was 6,037. Analysis was based on all programs that achieved the highest or second highest rating level in each state in 2016. "Achieved by start of analysis period" includes programs that we first observed at the highest or second highest rating (in 2014 for California and Ohio and in 2012 for the other seven states) and for which we cannot determine whether they had achieved those levels at entry. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The averages across states in the first two bars are calculated at the state level (rather than center level) so that states are weighted equally for each average. Because licensed centers that receive subsidies are almost always ineligible for alternative pathways or automatic ratings, this figure does not include a category for "achieved at entry, eligible for automatic rating or alternative pathway."

Figure reads: In California, which did not offer tiered reimbursement rates to licensed centers that received subsidies, 5 percent of licensed centers that received subsidies achieved one of the top two rating levels by start of analysis period, 14 percent achieved one of the top two ratings at entry and were not eligible for automatic rating or alternative pathway and 17 percent achieved one of the top two ratings through movement up.

Figure 11. Median TQRIS rating levels for each program type, by offer of tiered reimbursement rates, 2016



Note: The total number of programs was 13,357. Analysis included only programs that were rated. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. Massachusetts started granting the second highest and highest rating levels in January and November 2014, respectively. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The median across states is calculated at the state level (rather than center level) so that states are weighted equally.

Figure reads: The median rating level for programs rated by TQRIS in 2016 in Massachusetts was the lowest level for licensed center receiving subsidies and licensed center not receiving subsidies and the second lowest level from Head Start programs and state-funded pre-K programs

### Conclusion

RTT-ELC tasked states with developing TQRIS that promote participation among a range of early learning and development programs. It also encouraged states to increase the number of programs that attain the highest rating levels, particularly to increase access to high quality programs for high-needs children. TQRIS have developed in different ways, with each state selecting a set of TQRIS characteristics that are unique and largely untested. The relative newness of many TQRIS presents challenges to administrators and policymakers interested in making informed decisions about how to structure or refine their systems to achieve their goals. This analysis takes a step toward understanding programs' ratings at TQRIS entry and achievement of the highest rating levels by describing patterns in states that have made different decisions about how to structure the TQRIS or make use of certain policies.

Cross-state analyses of these systems can provide important information about trends that are worth exploring further. The descriptive patterns presented in this brief reinforce the disparities across states in how TQRIS are structured and the policies used within them. However, the findings do not provide evidence that particular policies *caused* the observed patterns in programs' ratings. Each TQRIS is a unique constellation of characteristics (such as rating structure) and policy decisions (such as alternative pathways) that combine with the composition of the standards that comprise the ratings themselves and the longevity of implementation to make a complex system. Disentangling the pieces to identify what works and for which programs is challenging, yet states desire information to structure and refine TQRIS in ways that will meet the goals of quality improvement for programs and good outcomes for children.

The patterns identified by this descriptive work suggest several issues that future research could investigate. First, in the nine Round 1 RTT-ELC states, alternative pathways and automatic ratings were generally not related to higher ratings at entry for state-funded pre-K or Head Start programs. This appeared to be due, in part, to inconsistencies in how states applied alternative pathway and automatic ratings policies, as well as high ratings among states without these policies. The latter could suggest that, at least in some states, external standards for these types of programs could align well with states' TQRIS standards. Thus, it might be useful for research to explicitly test the alignment across sets of standards. For example, future studies could try to create a crosswalk between the sets of standards or conduct the full rating process on a sample of the programs that would receive alternative pathways or automatic ratings to verify the accuracy of their ratings.

Second, requiring programs to enter at the lowest rating level was associated with lower ratings at entry for licensed centers that did not receive subsidies but not for those that received subsidies. Entry level requirements, along with other factors, might play some role in whether these programs enter at lower levels. However, it is also possible that licensed centers realistically have substantial room to improve their ratings. Future research might further examine how entry requirements affect the accuracy of programs' rating at entry.

Third, states that had implemented TQRIS for more than 10 years by 2016 had higher percentages of programs at top rating levels. This could reflect differences in the TQRIS characteristics and policies implemented by states that had implemented TQRIS the longest, programs in these states having more time to reach the top rating levels, or other differences between these states and states that adopted TQRIS more recently. As TQRIS continue to evolve,

it will be important to understand how long it takes for states to fully implement systems and policies that might promote programs' improvement and attainment of the top rating levels.

Fourth, states with building block rating structures had lower percentages of programs that attained top rating levels than states with points or hybrid rating structures. This finding does not necessarily imply that particular rating structures cause higher ratings. For example, states that had building block rating structures also differed in other ways from states that had points or hybrid rating structures, such as in their length of TQRIS implementation. Nevertheless, the patterns of ratings for states with different rating structures are in line with prior research that found that building block rating structures might hold programs at lower rating levels by requiring them to meet all of the standards, in contrast to point or hybrid rating structures, which could offer programs some flexibility to choose which standards they meet. Yet, these differences in how the rating structures treat standards might result in very different definitions of quality for a given rating. This suggests the need for additional research on how quality varies across programs that attain the same rating within each rating structure. In addition, little is known about which rating structures (and definitions of quality) lead to better outcomes for children. Across various states (and rating structures), previous research has found little consistent evidence of an association between programs' TQRIS ratings and children's outcomes (Sabol et al. 2013; Tout et al. 2017).

Fifth, patterns of ratings for licensed centers that received subsidies provided limited information about the relationship between their ratings and states' offer of tiered subsidy reimbursement rates. Additional research is needed to test the effectiveness of financial incentives and other supports that could help these programs improve.

Finally, this brief does not examine how states' TQRIS characteristics or policies relate to programs' participation in TQRIS, and it focuses on only nine states, each of which measure quality differently. Additional research that examines how TQRIS characteristics and policies affect programs' participation and quality, using consistent measures of the child care environment or children's development across states and program types could be useful. Such research could further inform states' decisions about TQRIS and help facilitate increased access to high quality early care and education experiences for children.

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### **Endnotes**

- <sup>1</sup> For more information on the history and implementation of TQRIS, see the first report from this study, Kirby et al. (2017).
- <sup>2</sup> Information from BUILD Initiative (2017) on the current 44 TQRIS indicates a wide range in characteristics such as rating structure and validity period. For example, 18 TQRIS use a hybrid rating structure, 19 a building block structure, and 7 a points structure. The validity period is three years in 17 TQRIS, two years in 9, one year in 8, and a period that falls outside these categories in 10 TQRIS.
- <sup>3</sup> Rhode Island did not call its incentives tiered reimbursement but they functioned in the same way and we classified the policy as such for cross-state aggregation.
- <sup>4</sup> We considered Minnesota as implementing its TQRIS statewide in 2012, the year that programs in 22 of the state's 87 counties were eligible to participate in the full-rating process; eligibility gradually expanded to all counties by 2015.

### APPENDIX A. METHODS AND SAMPLE SIZES

This appendix provides additional details on data sources, standardizing variables across states, sample sizes, and defining program types. To support cross-state aggregation, we used information from administrative data sources from multiple states to classify programs into types.

State administrative data sources. The administrative data we collected came from multiple sources within each state. The landscape of center-based early learning and development programs that serve young children is quite diverse, and states have typically decentralized program oversight. For example, often distinct offices with separate data systems administer licensing and child care subsidies but both are generally under the auspices of a state's human or social services agency; state-funded pre-K programs are generally under the state's department of education; and Head Start is a federally administered program. The RTT-ELC grants aimed, in part, to support the integration of state early care and education systems, but the data still reside in many different agencies and entities. As a result, the data we requested came from multiple sources within each state. In five states (Maryland, Massachusetts, Minnesota, North Carolina, and Washington), we worked with a main contact in one department who coordinated with others in the state to gather and submit the data. In the four other states (California, Delaware, Ohio, and Rhode Island), we obtained data from a variety of sources.

**Standardizing variables across states.** We used information from multiple sources to maximize our ability to determine licensing status, funding sources, and program closings and to build a longitudinal analysis file for each state. To analyze results across states, we used a consistent method to construct variables from the raw data each state provided. Our definitions of program types or other program elements may not exactly match each state's definition. As a result, the numbers in this brief may differ from those in the annual progress reports that states submitted to ED for RTT-ELC. The data from the state RTT-ELC yearly reports are difficult to assess across states, given the differences in data coverage of children and programs, the methods of classifying programs by type, and the methods of counting programs in rating levels. In addition, because those data represent a single point in time (that is, they are not longitudinal), discerning patterns of TQRIS entry and movement up the rating levels by specific program types over time is challenging.

**Sample sizes.** We collected information about all early learning and development programs in the state—both those that participated in the TQRIS and those that did not—to provide a complete picture of how availability to high quality programs may have changed under RTT-ELC. The number of early learning and development programs varies across the states and, therefore, influences the number of programs that can participate in the TQRIS. Some states count programs as participating in TQRIS before they officially receive a rating. For analyses on ratings in this brief, we included only programs that had received a TQRIS rating. Table A.1 presents the numbers of all early learning and development programs, the number of TQRIS participating programs, and the number of TQRIS-rated programs for each year in the analysis period by state.

Table A.1. Total number of early learning and development programs in the nine Round 1 RTT-ELC states and number of TQRIS participating and rated programs, 2012 to 2016

State and number of programs	2012	2013	2014	2015	2016
California					
Total	n.a.	n.a.	7,616	8,406	8,442
Participating	n.a.	n.a.	1,214	2,009	2,226
Rated	n.a.	n.a.	949	1,913	2,153
Delaware					
Total	373	426	452	455	451
Participating	123	253	362	378	382
Rated	123	253	362	377	379
Maryland					
Total	1,947	1,934	1,922	1,920	1,919
Participating	0	102	447	1,011	1,266
Rated	0	102	447	1,002	1,257
Massachusetts					
Total	2,384	2,713	2,679	2,795	2,597
Participating	814	1,019	1,103	1,215	1,175
Rated	795	986	1,072	1,166	1,125
Minnesota					
Total	2,851	2,851	2,851	2,851	2,851
Participating	485	1,312	1,586	1,836	1,844
Rated	485	1,312	1,584	1,827	1,831
North Carolina					
Total	4,351	4,401	4,355	4,300	4,116
Participating	3,713	3,756	3,699	3,738	3,629
Rated	3,651	3,699	3,652	3,696	3,594
Ohio					
Total	n.a.	n.a.	6,085	6,024	5,813
Participating	n.a.	n.a.	1,141	1,561	1,739
Rated	n.a.	n.a.	1,128	1,534	1,722
Rhode Island					
Total	326	332	334	335	330
Participating	40	55	237	265	264
Rated	40	55	237	265	261
Washington					
Total	2,055	1,994	1,932	1,957	1,836
Participating	356	815	967	1,035	1,089
Rated	320	773	924	987	1,035
All states except California and Ohio					
Total	14,287	14,651	14,525	14,613	14,100
Participating	5,531	7,312	8,401	9,478	9,649
Rated	5,414	7,180	8,278	9,320	9,482
All states including California and Ohio					
Total					
TULai	n.a.	n.a.	28,226	29,043	28,355
Participating	n.a. n.a.	n.a. n.a.	28,226 10,756	29,043 13,048	28,355 13,614

Note:

Analysis counted all licensed centers, Head Start, and state-funded pre-K programs in each state. A program was considered participating if it was in the TQRIS at any point during the year. Rated programs were analyzed as of June of each year; therefore, numbers of rated programs may differ slightly than number of participating programs even for states that do not generally have unrated programs. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide.

The table omits California and Ohio before 2014. Data were not available from California before 2014. Due to significant system changes in Ohio in late 2013, the analysis included only data from 2014 to 2016. Data for 2016 are from January to June.

n.a. = not applicable; RTT-ELC = Race to the Top-Early Learning Challenge; TQRIS = tiered quality rating and improvement system.

**Defining program types.** We developed mutually exclusive program types to mirror those typically found in the state RTT-ELC yearly reports as follows:

- State-funded pre-K.<sup>a</sup> Includes (1) programs in a school-based setting that received state pre-K funds; (2) programs that received only state pre-K funds, or a combination of state pre-K and Child Care and Development Fund or other child care subsidy funds, but not Head Start; and (3) a small percentage of licensed centers that received both Head Start and state pre-K funds but did not have Head Start in the program name.
- **Head Start**. Includes (1) programs that had Head Start in their name, but also might have received Child Care and Development Fund or other child care subsidy funds, or state pre-K funding; and (2) programs that did not have Head Start in their name, but received only Head Start funding, or that received Head Start and Child Care and Development Fund or other child care subsidy funds.
- **Licensed centers, received subsidies**. Includes licensed centers that received Child Care and Development Fund or similar subsidies to support low-income children in the program but did not receive Head Start or state pre-K funding.
- **Licensed centers, no subsidies**. Includes licensed centers that did not receive Child Care and Development Fund or other child care subsidy, Head Start, or state pre-K funding.

Table A.2 presents the percentage of programs within each program type as well as the percentages, by program type, that were licensed, and that received the various sources of public funding.

All analyses exclude license-exempt programs that were not either state-funded pre-K or Head Start programs (which are often considered license-exempt when operated in public schools). Most states did not provide data on these types of license-exempt programs. Only three states allowed license-exempt programs that were not receiving state pre-K or Head Start funds to participate in TQRIS. Such programs could include those administered on Tribal lands or on military bases, or those affiliated with a religious program. These programs comprised less than 1 percent of TQRIS participating programs in 2016 in two of the three states and less than 5 percent in the third state.

<sup>&</sup>lt;sup>a</sup> We classified state-funded Head Start in Delaware as state-funded pre-K to ensure program types across the nine states were comparable and to distinguish the federal Head Start program from state-funded programs.

Table A.2. Licensing status and funding of TQRIS participating programs in 2016, by program type

Program type	Number of programs	Percentage of programs	Percentage licensed	Percentage of programs receiving each type of funding			
				Child care subsidies	Head Start funds	State pre-K funds	Funding from multiple sources
All programs participating in TQRIS	13,614	100	87	57	13	31	13
State-funded pre-K	3,920	29	60	28	6	100	31
School-based pre-K	2,174	16	28	5	2	100	6
Licensed pre-K	1,746	13	100	55	12	100	61
Head Start	1,468	11	90	26	100	19	40
Licensed, received subsidies	6,325	46	100	100	0	0	0
Licensed, no subsidies	1,901	14	100	0	0	0	0

Note: This analysis included all state-funded pre-K, Head Start, and licensed centers that each state considered participating in 2016, including those that had not yet received a rating. School-based pre-K includes a small number of license-exempt programs receiving state pre-K funding. The analysis excluded all other license-exempt programs. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide.

### APPENDIX B. ADDITIONAL FINDINGS

This appendix presents additional findings. Figure B.1 presents the composition of TQRIS participating programs by state. Figures B.2 through B.4 present the distribution of ratings in each state, by length of TQRIS implementation, rating structure, and offer of tiered reimbursement rates.

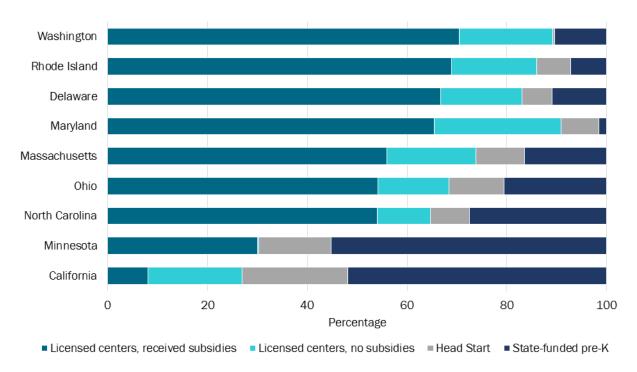


Figure B.1. Composition of TQRIS participating programs, by state, 2016

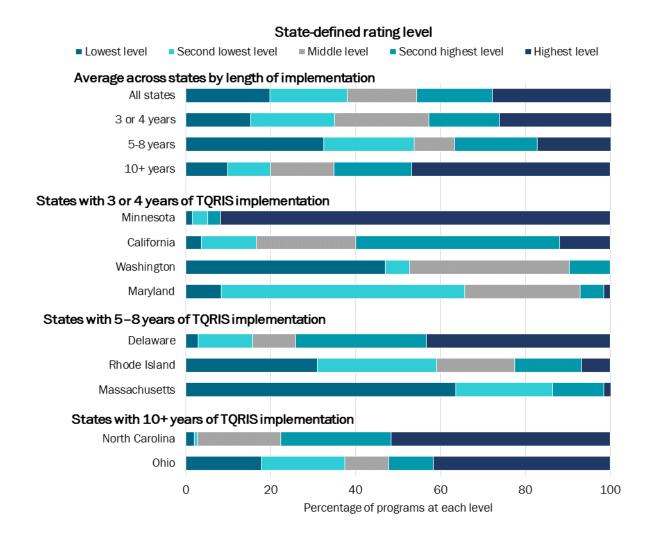
Source: Administrative data collected from Round 1 RTT-ELC states from October 2016 to April 2017.

Note: The total number of TQRIS-rated programs was 13,357 in 2016. Analysis included licensed centers, Head Start programs, and state-funded pre-K programs that were considered participating by each state, including those that had not yet received a rating. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide.

Figure reads: Of the programs that were rated by TQRIS in 2016 in California, 8 percent were licensed centers that received subsidies, 19 percent were licensed centers that did not receive subsidies, 21 percent were Head Start programs, and 52 percent were state-funded pre-K programs.

pre-K = prekindergarten; RTT-ELC = Race to the Top-Early Learning Challenge; TQRIS = tiered quality rating and improvement systems.

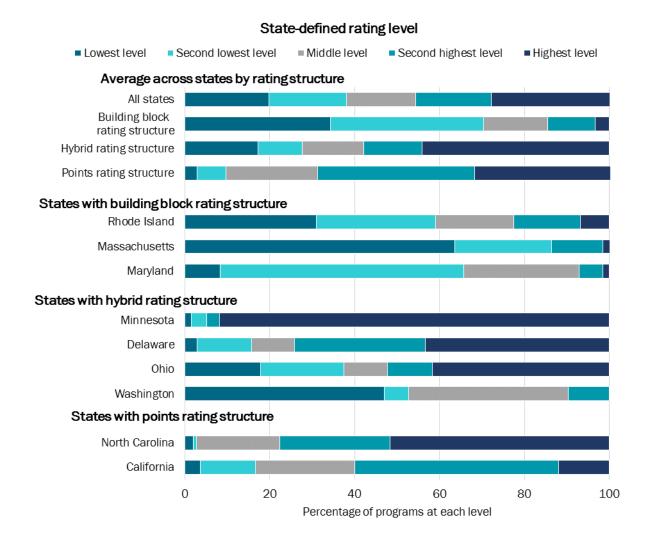
Figure B.2. Percentages of programs in each state-defined TQRIS rating level in 2016, by length of TQRIS implementation



Note: The total number of programs was 13,357. Analysis included only rated programs. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. Massachusetts started granting the second highest and highest rating levels in January and November 2014, respectively. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The average across states is calculated at the state level (rather than center level) so that states are weighted equally.

Figure reads: In North Carolina, which implemented TQRIS 10 or more years ago, 2 percent of programs were rated at the lowest level, 1 percent were rated at the second lowest level, 20 percent were rated at the middle level, 26 percent were rated at the second highest level, and 52 percent were rated at the highest level.

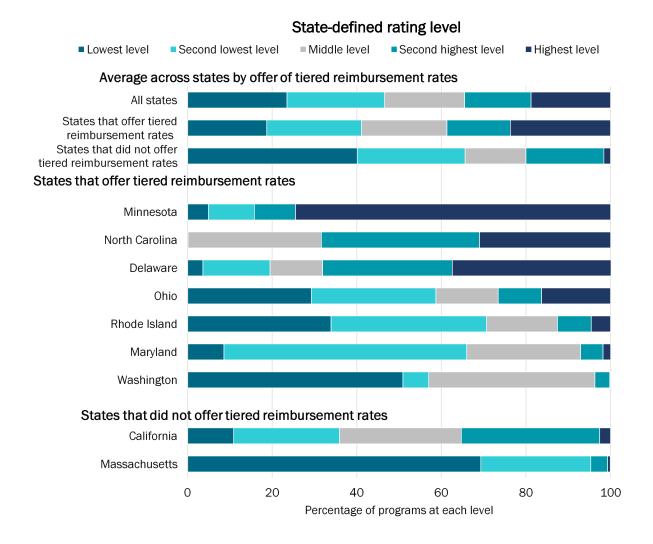
Figure B.3. Percentages of programs in each state-defined TQRIS rating level in 2016, by rating structure



Note: The total number of programs was 13,357. Analysis included only rated programs. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. Massachusetts started granting the second highest and highest rating levels in January and November 2014, respectively. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide. The average across states is calculated at the state level (rather than center level) so that states are weighted equally.

Figure reads: In North Carolina, which used a points rating structure, 2 percent of programs were rated at the lowest level, 1 percent were rated at the second lowest level, 20 percent were rated at the middle level, 26 percent were rated at the second highest level, and 52 percent were rated at the highest level.

Figure B.4. Percentages of licensed programs receiving subsides in each state-defined TQRIS rating level in 2016, by offer of tiered reimbursement rates



Note: The total number of programs was 13,357. Analysis included only programs that were rated. Rating categories reflect the order of ratings within states' rating structure, and treat states with four levels (Massachusetts and Minnesota) as having no middle level. Massachusetts started granting the second highest and highest rating levels in January and November 2014, respectively. California data are from 16 counties that implemented TQRIS beginning in 2012; all other data are statewide.

Figure reads: In California, which did not offer tiered reimbursement rates to licensed centers that received subsides, 11 percent of programs were rated at the lowest level, 25 percent were rated at the second lowest level, 29 percent were rated at the middle level, 33 percent were rated at the second highest level, and 3 percent were rated at the highest level.

### For more information on the full study, please visit:

https://ies.ed.gov/ncee/projects/evaluation/other\_racetotop.asp



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