

# Vermont STARS Validation and Evaluation Study 2015-2017

## Final Report

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# Introduction

## Study overview and purpose

Vermont's STep Ahead Recognition and Improvement System (STARS) is the state's Quality Rating and Improvement System (QRIS). A QRIS is a framework for recognizing, improving, and communicating the extent to which early care and education programs and providers demonstrate specified indicators of high-quality practice.<sup>1</sup> A QRIS also clearly articulates steps programs can take to progress from compliance with basic licensing regulations to attaining high standards of quality. STARS was developed in 2003 and provides a quality framework for licensed and registered child care centers and preschools, family child care homes, and school-age programs. Vermont STARS awards points recognizing program practices in five arenas of quality: Regulatory History, Staff Qualifications, Families and Community, Program Practices, and Administration.

As a recipient of the Race to the Top – Early Learning Challenge Grant (RTT-ELC), Vermont committed to evaluating STARS as part of an ongoing process of continuous quality improvement and to understand how STARS is working to achieve better outcomes for Vermont children. Child Trends worked with the Vermont STARS Evaluation Committee to conduct a validation and evaluation study of STARS. The design of this study was informed by national research on QRIS validation approaches<sup>2</sup> and included the following research activities:

- **Quality arena and indicator crosswalk:** Compared the concepts of quality included in STARS to other QRIS to identify aspects of quality not included in STARS and the implications for STARS;
- **Distribution of points awarded:** Used administrative data to analyze the distribution of the STARS points (which were associated with a set of quality practices that programs demonstrate) and the capacity of the rating structure to produce accurate ratings;
- **STARS verification process:** Examined the reliability of the STARS verification and rating process to determine the degree to which the rating process is fair;
- **Participant feedback:** Gathered data from mentors and providers participating in STARS to understand their experiences and inform continuous quality improvement; and
- **STARS rating structure:** Examined program quality using the Environment Rating Scale (ERS) to determine the extent to which the STARS ratings are accurate and meaningful.

See Appendix A for the detailed methodology of the study.

## Research questions

This study was guided by the following two primary research questions:

1. What were participants', mentors', and key stakeholders' perceptions of the Vermont STARS quality framework and quality improvement supports?
2. To what extent did the design of the Vermont STARS quality framework support a valid assessment of program quality?

# Vermont STARS background

Vermont STARS is a “points” rating system in which programs earn points depending on the quality indicators they achieve. The points are added together to determine the appropriate star rating (between one and five; see Table 1). Points can be earned in any of the five quality arenas (Regulatory History, Staff Qualifications, Families and Community, Program Practices, and Administration). There is no minimum number of points required in any specific arena.

**Table 1. Star level by points achieved**

Total number of points	
<b>1 star</b>	1-4 points
<b>2 stars</b>	5-8 points
<b>3 stars</b>	9-11 points
<b>4 stars</b>	12-14 points
<b>5 stars</b>	15-17 points

The way in which programs earn points in Vermont STARS is unique compared to other points-based QRIS. In most point systems, programs earn points for demonstrating that they meet a single indicator. For example, a program might earn two points for demonstrating that all staff have an individual professional development plan, one point for hosting an annual parent-teacher conference, and three points for implementing a curriculum aligned with the state’s early learning guidelines. In Vermont STARS, programs earn points by meeting multiple indicators. Figure 1 provides an example of the indicators/criteria used to score one point in the Families and Community arena.

*Source: Vermont Step Ahead Recognition System Application*

In this example, programs document four activities to achieve points (i.e., provide a family survey with results, a written philosophy of family involvement, family engagement strategies, and networking strategies).

**Figure 1. Vermont STARS point structure example, Families and Community arena**

**1 POINT**

**Evidence to meet the Families and Communities Standards**

- The program surveys families at least once a year, and uses information from the survey to improve the program. The survey includes questions on daily routines, curriculum, and program policies.
- A written philosophy regarding the relationship between the program and families, including the role of families in a child’s development and how programs support that role.
- The program has strategies to communicate with families, which they evaluate for efficacy.
- The program staff engages in professional networking activities. These are defined as activities where program staff has the opportunity to engage with other professionals in the field to share ideas, information, and professional knowledge.

**What to submit for verification**

- A blank sample of the family survey and a summary of the results of the survey.
- A written philosophy on parent/family relationships with the program.
- A description of three communication strategies and a summary of their effectiveness.
- list of four networking activities (see Table A on page 20) including the date, activity, name of the activity organizer or contact, and staff attendee.

*Source: STARS application for Licensed Early Childhood Programs – Revised 2016*

In this way, Vermont’s point-based system is similar to “block” QRIS where programs must meet multiple indicators in a block of criteria to earn a rating. STARS requires that programs meet multiple criteria to earn points, but unlike block-type QRIS, programs may select arenas in which they can earn points.

## Quality arenas

STARS is composed of five quality arenas: Regulatory History, Staff Qualifications, Families and Community, Program Practices, and Administration described briefly below.

- **Regulatory History:** Programs can earn up to three points based on their compliance with state regulations over time.
- **Staff Qualifications and Professional Development<sup>a</sup>:** Programs earn points up to three points based on staff qualifications, training, and experience.
- **Families and Community:** Programs can earn up to three points based on their reported practices supporting children, families, and communities.
- **Program Practices:** Programs can earn up to five points for assessing what they do with children and plan for improvements.
- **Administration:** Programs can earn up to three points for their operating policies and business practices.

## Participation in STARS

As of fall 2015, nearly 75 percent of all licensed and registered providers in Vermont were participating in STARS (n = 1,088; see Table 2). In 2015 Vermont had five distinct program types.

- **Registered Family Child Care Home (Registered FCCH):** Registered FCCH are family child care homes where the provider typically cares for no more than six children at any time, in addition to up to four school-age children.
- **Licensed Family Child Care Home (Licensed FCCH):** A licensed FCCH may provide care for up to 12 children in the residence of the licensee.
- **Center Based Child Care and Preschool Programs (CBCCPP):** CBCCPPs provide care in community-based or school-based settings for children ages six weeks to 13 years of age. CBCCPPs also include Head Start programs and publicly and privately-operated preschool programs.
- **Center Based Child Care and Preschool Programs (CBCCPP) – Non-recurring:** Non-recurring CBCCPPs provide child care that meets the short term, temporary child care needs of parents arising from, but not limited to, tourism, recreation, or shopping.<sup>b</sup>
- **Afterschool Child Care Program (ASP):** ASPs provide care in community-based or school-based settings for children in Kindergarten or older.

<sup>a</sup> This arena is abbreviated to as Staff Qualifications throughout the remainder of the report.

<sup>b</sup> At the time of the study, no non-recurring CBCCPPs were participating in STARS; therefore, this program type was not considered in this study.

Over half of the participants were home-based providers (n= 604). ASPs had the lowest participation rate (45%), whereas CBCCPPs and licensed FCCHs had higher participation rates (78%, 88%).

**Table 2. Enrollment in STARS by program type**

Program type	Total in state	Total in STARS	Percentage participating
Registered FCCH	796	588	74%
CBCCPP	533	418	78%
ASP	147	66	45%
Licensed FCCH	18	16	88%
<b>Total</b>	<b>1,467</b>	<b>1,088</b>	<b>74%</b>

Source: Bright Futures Information System, September 2015

In addition to the five program types, the analysis in this report considered three additional program categories where programs meet additional requirements. First, Head Start programs (n=28) were separated from other CBCCPPs. Head Start programs with a positive federal monitoring review report may apply for a streamlined STARS application. Because this streamlined application is not available to all CBCCPPs, analyzing Head Start programs separately provides a helpful lens on how Head Start programs are participating in STARS compared to non-Head Start programs. Second, CBCCPPs with a national accreditation (n=90) are also eligible for a streamlined application process. Like analyzing Head Start programs separately from non-Head Start programs, analyzing accredited programs helps interpret how these programs are performing in STARS. Third, Prequalified Pre-Kindergarten programs (from any licensed program type) were analyzed separately for this report. To become a Prequalified Pre-Kindergarten program, programs rated at three stars or above may apply for the designation that may make them eligible to receive public education funds for providing Pre-Kindergarten services in their programs. As of November 2015, 291 programs across all program types had been awarded the Prequalified Pre-Kindergarten designation.

Tables 3 shows the number of each program type by star level and Table 4 shows the three additional program categories.

**Table 3. STARS levels by program type**

	1 star	2 stars	3 stars	4 stars	5 stars	All programs
Registered FCCH	226	172	118	45	27	588
Licensed FCCH	3	1	4	4	4	16
CBCCPP	13	26	62	129	160	390
ASP	3	9	14	25	15	66

Source: Child Trends analysis of Bright Futures Information System and STARS databases

**Table 4. STARS levels by additional program categories**

	1 star	2 stars	3 stars	4 stars	5 stars	All programs
Head Start	0	0	1	0	27	28
Accredited	0	0	1	2	87	90
Prequal Pre-K	0	0	30	108	153	291*

\*249 are CBCCPPs; 24 are registered FCCHs.

Source: Child Trends analysis of Bright Futures Information System and STARS databases

## Quality improvement supports

In addition to rating early childhood programs, a key role of a QRIS is supporting the quality improvement of rated programs and providers in the system. STARS offers an informal set of supports that includes:

- Technical assistance from STARS staff on completing the STARS application
- Opportunity to have an informal ERS observation and consultation with ERS assessors to create a program improvement plan
- Referrals to mentoring agencies that provide individualized technical assistance, consultation, and coaching
- Financial incentives including:
  - Corporate discounts to local and national school supply supplies (e.g., Kaplan, Lakeshore, Michael's)
  - Bonus payments for each star level earned (one star – \$250, two stars – \$500, three stars – \$1,000, four stars – \$1,150, five stars – \$1,550)
  - Tiered child care subsidy reimbursement rates (one star – 5% above base rate, two stars – 10% above base rate, three stars – 20% above base rate, four stars – 30% above base rate, five stars – 40% above base rate)<sup>3</sup>



## Mentor programs

Several organizations/initiatives support quality improvement across early childhood and afterschool programs in Vermont. Providers participating in STARS can engage the services of these organizations/initiatives or other independent consultants to help them set and achieve their quality improvement goals. With increasing participation in STARS, these organizations/initiatives have helped promote the benefits of a STARS rating, have helped programs in complete their application and have helped programs pursue further quality improvement goals after becoming a rated program. The most widely utilized agencies include:

- VAEYC Quality project mentors
- VT Afterschool – Mentors for Quality support afterschool programs
- VT Child Care Industry and Careers Council – Child Care Apprenticeship mentor/supervisors
- VT Birth to Five Mentors
- Prevent Child Abuse and Neglect mentors
- Children’s Integrated Services – child care consultants
- Agency of Education – Early MTSS (multi-tiered systems of support) coaches
- Individual public schools – consultants and mentors working with public school teachers
- VT Department of Health – Child Care Wellness Consultants – Nurse and wellness consultants to child care
- VSArts coach/instructors who work in child care programs
- VT Community Loan Fund – Project Success business consultants
- Northern Lights Career Development Center - provide career advising and technical assistance

## Study approach

The Vermont STARS Validation and Evaluation Study used a mixed methods design to answer the research questions of the study. This section details the processes and procedures used across the primary data sources. Further details on each data source can be found in Appendix A.

Research question	Data sources
<p><b>What were the perceptions of the Vermont STARS quality framework and quality improvement supports?</b></p>	<p>Surveys:</p> <ul style="list-style-type: none"> <li>• Rated programs and providers</li> <li>• Mentors</li> <li>• Key Stakeholders</li> </ul>
<p><b>To what extent did the design of the Vermont STARS quality framework support a valid assessment of program quality?</b></p>	<p>Observations:</p> <ul style="list-style-type: none"> <li>• ERS observations in CBCCPPs and registered FCCHs</li> </ul> <p>Document review:</p> <ul style="list-style-type: none"> <li>• STARS Applications</li> <li>• Quality Compendium</li> </ul> <p>Interviews:</p> <ul style="list-style-type: none"> <li>• STARS staff and ERS assessors</li> </ul>

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Chapter 1

# Providers' Perceptions of Vermont STARS quality framework and quality improvement supports

Provider Survey

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## Purpose of this chapter

The goal of the analysis presented in this chapter was to learn more about providers participating in the STARS system and their perceptions of STARS. Providers participating in STARS were given a survey that asked about their background and work, perceptions of the STARS system, and feedback about how to improve STARS.

## Contents

1. Method
2. Why did providers join STARS?
3. What were providers' perceptions of STARS?
4. What did providers think of STARS arenas?
5. Where did providers focus on quality improvement within STARS arenas?
6. What did providers think of STARS mentors?
7. What changes did programs make as a result of joining STARS?

## Summary of findings

- When providers were asked why they participated in STARS, the most commonly reported reasons were to participate in pre-Kindergarten (14%), to better attract families to their program (12%), to access bonus payments (11%), or to access higher Child Care Financial Assistance Program (CCFAP) reimbursement rates (11%).
- Fifty-two percent of providers felt that the STARS recognition process was fair. Forty-four percent of providers felt that the STARS recognition process accurately reflected program quality.
- Eighty-seven percent of providers agreed that the practices recognized by STARS aligned with what they believed are high-quality practices in ECE programs, and 77 percent agreed that STARS had been beneficial to their programs. Sixty-seven percent of providers agreed that STARS helped to improve their programs.
- Ninety-three percent of providers agreed that parents should consider a program's quality when choosing child care, and 68 percent of providers agreed that parents should consider a program's STARS level when choosing child care. Sixty-four percent of providers agreed that STARS levels were useful to parents.
- When asked about the STARS recognition process, 58 percent of providers agreed the application was easy to complete, and 67 percent felt the level they received accurately reflected their program quality.
- When providers were asked about the STARS structure, 88 percent appreciated the flexibility of STARS, and 62 percent of providers agreed that all programs at a certain STARS level should represent the same aspects of quality across the STARS arenas.
- Ninety-one percent of providers planned to maintain their participation in STARS once their current certificate expires.

- A large majority of providers agreed that the criteria within the Regulatory History arena (82%), Administration (81%), Program Practices (80%), Families and Community (80%), and Staff Qualifications (74%) were an appropriate set of requirements to represent program quality.
- When asked about additional requirements that could be added to STARS, 65 percent of providers agreed that practices related to health and wellness and 63 percent of providers agreed that practices related to healthy and nutritious meals would be welcome additions to the STARS arenas. Twenty-six percent agreed that cultural practices should be added to STARS, and 11 percent wanted asthma friendly practices added to STARS.
- When asked about the focus of their quality improvement efforts, 80 percent of providers reported focusing on the Families and Community arena, and 73 percent of providers reported focusing on the Program Practices arena. Fifty-eight percent reported focusing on the Staff Qualifications arena, 54 percent reported focusing on the Regulatory History, and 50 percent reported focusing on the Administration arena.
- When asked to rank the helpfulness of various STARS supports, the three supports rated as most helpful were the initial STARS bonus payments (83%), access to bonus payments (75%), and the annual STARS quality maintenance payments (70%).
- Sixty-four percent of providers reported working with at least one mentor since enrolling in STARS. The organization/initiative that supplied mentors to most providers (52%) and center-based teachers (23%) was Vermont Birth to Five (VB5). Eighty-one percent of providers reported that their mentor assisted them with their STARS application. Fifty percent of providers reported that their mentor helped them or their program with professional development.
- When asked about changes made to their program as a direct result of participating in STARS, 87 percent reported modifying their learning environment. When asked which change was most important, 34 percent reported changes related to staff training, education, and/or professional development. When asked which change was the hardest, 27 percent chose changes to assessment practices. When asked which change made the biggest benefit to children, families, and teachers, 23 percent selected changes to engaging families.

## Method

The survey was distributed via Survey Monkey, an online survey platform, in spring 2016 and was open for four weeks. The survey included multiple choice, check-all-that-apply, and open-ended questions.

Providers were contacted through information provided by the state. As a thank you for completing the survey, Child Trends randomly drew survey participants to receive incentives. Out of 1,012 providers who were sent the survey, 596 providers completed the survey (59% response rate).

## Characteristics of survey respondents and their programs

Survey participants were asked questions about their age, gender, race, home language, education, and major in school. Participants were 98 percent female, 96 percent White/Caucasian, and 95 percent spoke English at home. On average, providers had been working in early childhood education for 16 years and had spent 10 years in their current role. See Table 1-1 for age, level of education, Child Development Associate (CDA) status, and major of provider survey respondents.

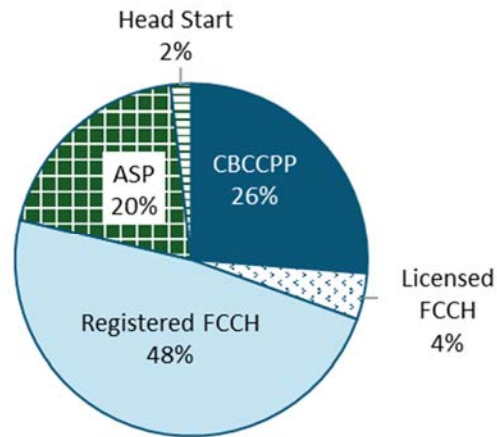
**Table 1-1. Characteristics of provider survey respondents**

Characteristic		Percentage
<b>Age (n=419)</b>	18-25	1%
	26-35	20%
	36-45	31%
	46-55	26%
	56-65	21%
	66 or older	1%
<b>Level of education (n=422)</b>	Less than high school	0%
	High school diploma/GED	11%
	Some college, but no degree	22%
	Associate's degree	13%
	Bachelor's degree	32%
	Graduate degree	21%
<b>CDA (n=419)</b>	Yes	21%
	No	64%
	Don't know	3%
	Not applicable	12%
<b>Major (n=313)</b>	Early childhood education or child development	48%
	K-12 education	18%
	Human services or social work	11%
	Psychology	11%
	Special Education	3%
	Other	19%

Source: Child Trends Vermont STARS Provider Survey, Spring 2016

See Figure 1-1. for a breakdown of the program type for responding providers.

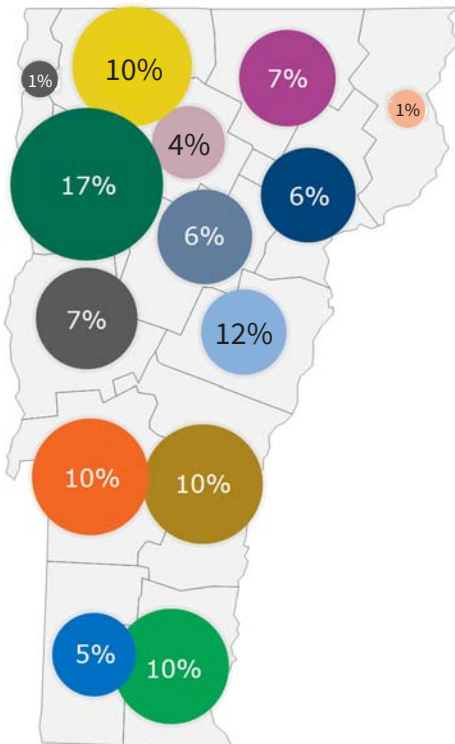
**Figure 1-1. Distribution of program types in the provider survey sample (n=423)**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

Survey respondents represented counties across Vermont (see Figure 1-2). The largest portion of respondents operated in Chittenden County.

**Figure 1-2. Map of provider survey respondents (n=417)**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

At the time of the survey, 71 percent of programs were fully enrolled and 62 percent had a waiting list.

Almost a quarter (24%) of programs offered services in addition to early care and education to families. Many (40%) of programs were Prequalified Pre-Kindergarten programs<sup>c</sup> providers, and 10 percent were representatives from publicly-operated preschool programs.

Participating programs served a wide variety of children. About one-third (31%) served infants, almost half (48%) served toddlers, about two-thirds (65%) served preschoolers, and 39 percent served school-aged children. See Table 1-2 for information about children served.

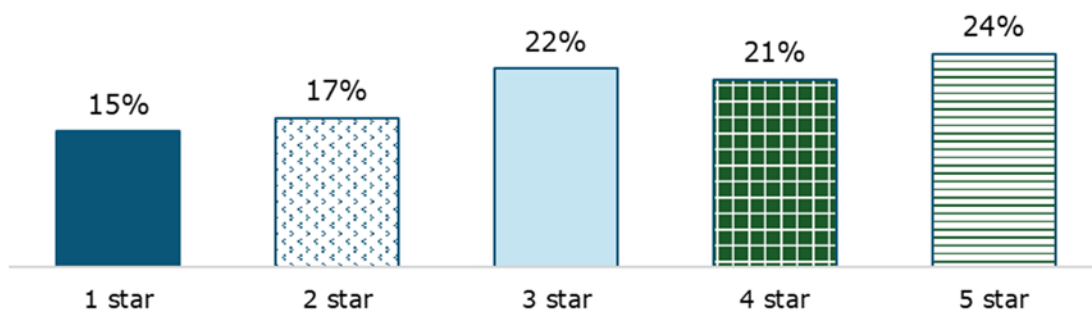
**Table 1-2. Information about children served by the programs of provider survey participants**

Percent of children served who...	Average percentage
Received state child care assistance in the past month (n=344)	26%
Have an Individualized Education Program (IEP) (n=318)	7%
Have an Individualized Family Services Plan (IFSP) (n=239)	3%
Are dual language learners (n=269)	3%
Experience poverty as defined by $\leq 100\%$ of poverty (\$24,250 annual income for family of 4) (n=272)	25%

Source: Child Trends Vermont STARS Provider Survey, Spring 2016

Programs of participating providers were spread across star ratings. See Figure 1-3 for the distribution by star rating.

**Figure 1-3. Distribution of star rating across provider survey participants**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

<sup>c</sup> Under Vermont's Act 166, any high-quality child care provider or school-based preschool program may qualify as a Pre-K provider under the statute's requirements. More information can be found at <https://www.vtpublicprek.info/how-it-works>



## Why did providers join STARS?

Providers were asked about their primary reason for joining STARS. Many providers chose a primary reason related to accessing STARS resources, including access to bonus payments (11%) or quality improvement supports (10%). Some providers (6%) were interested in accessing grant opportunities, and some (3%) joined STARS primarily to access mentoring supports. Few providers (2%) joined to access a consultation from an RN Child Care Wellness Consultant.

Some providers (14%) ranked their primary reason was to participate in public pre-K, while 11 percent joined to access higher Child Care Financial Assistance Program (CCFAP) reimbursement rates. Few providers (less than 1%) participated to use Shared Services VT.

Some providers (9%) joined to be part of a statewide early childhood initiative; similarly, eight percent joined to be part of Vermont's own program quality recognition initiative. Some providers (7%) were motivated to join STARS primarily because it was important for their professional development or professionalism.

Some providers (12%) rated their primary reason for joining STARS was to better attract families to their program. A small portion (5%) reported that someone else in their organization required their program to participate, and two percent joined because their peers and colleagues were participating in STARS.

## What were providers' perceptions of STARS?

Providers were asked about their perceptions and experiences with Vermont STARS.

### Fairness of the STARS recognition process

Half of providers (52%) felt that the STARS recognition process was fair (see Figure 1-4). Some providers (14%) reported that the STARS recognition process was not fair, and over a third (34%) answered "don't know" when asked this question. Providers whose programs earned a higher STARS level were more likely to agree that the STARS recognition process was fair compared to providers whose programs earned a lower level.

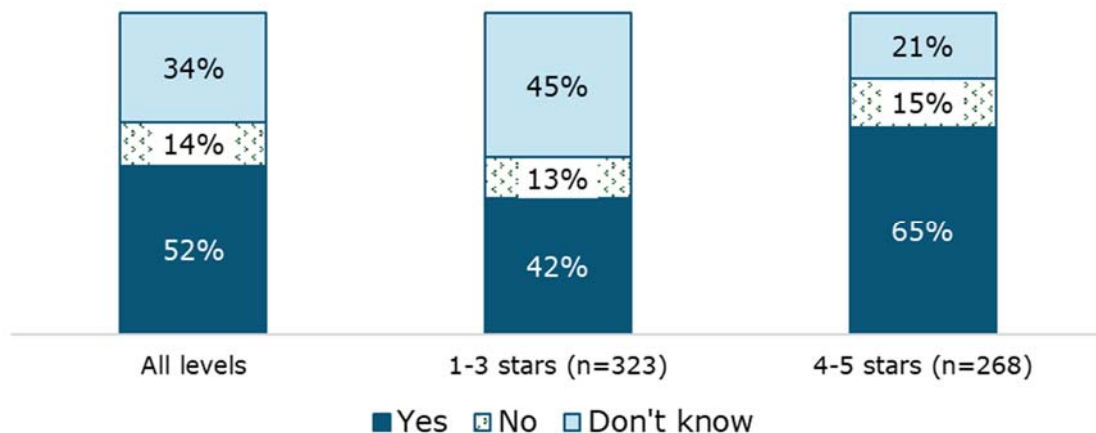
*"I perceived the STARS efforts to be a highly organized and [a] well-constructed process for raising the early-childhood education bar throughout the state."*

Providers who felt that the STARS recognition process was fair were given the option to explain their reasoning; comments were coded and categorized into similar themes. Some providers (18%) explained the process was clear and others (17%) said STARS gives appropriate recognition for their hard work. See the pull-out boxes for an example quote.

Providers who felt that the STARS recognition process was not fair were asked how the fairness of the STARS recognition process could be improved. Among these providers, most (82%) suggested modifying the arenas, including adding an observation component and rewarding teachers and directors for their experience rather than level of education. Almost one-third (30%) mentioned creating consistency across program types, such as part-time and seasonal programs, and within STARS levels. See the pull-out boxes for an example quote.

*"I look at other programs with the same stars as ours and they aren't nearly the quality as ours."*

**Figure 1-4. Response to the question “Do you think the STARS recognition process is fair?” by star level**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

## Accuracy of the STARS recognition process

Less than half (44%) of providers felt that the STARS recognition process was an accurate reflection of program quality (see Figure 1-5). Over one-quarter of providers (27%) responded that the STARS recognition process was not an accurate reflection of program quality, and over one-quarter (29%) answered “don’t know.”

Providers who agreed that the STARS recognition process was an accurate reflection of program quality were given a chance to explain. Providers mostly mentioned their belief in the system; see the pull-out box for an example quote.

*“It gives programs information as to what is considered best practice and helps programs be accountable.”*

Providers who did not feel that the STARS recognition process was an accurate reflection of program quality were given a chance to comment on how the process could be improved to more

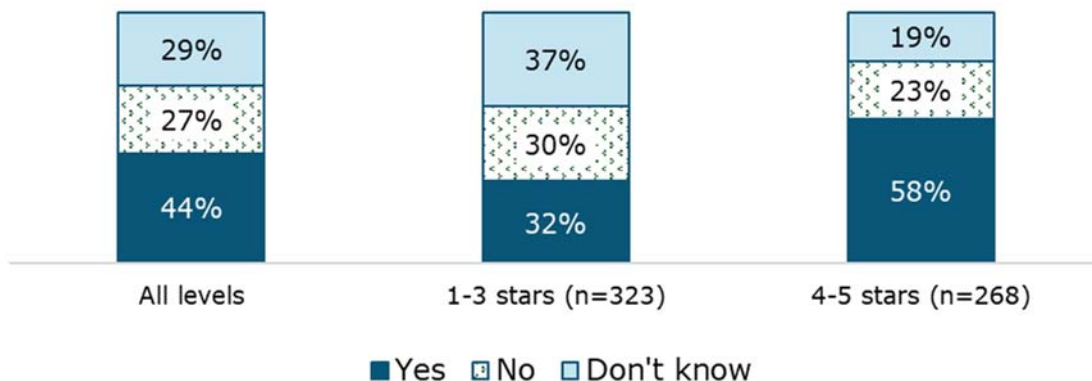
accurately reflect program quality. About a quarter of providers (24%) felt more on-site visits could help. Of those, almost half (46%) specified that there should be an observation component of the STARS recognition process to see the actual quality of the program, rather than the quality of the paperwork submitted to STARS. In line with adding an observation component, some providers (17%) reported reducing the amount of paperwork needed to earn a STARS level. In addition, some providers (12%) explained that the process would be more accurate if there was more focus on interactions between providers and children. See the pull-out box for an example quote.

*“...a program visit not just looking at how many soft toys are in the rooms but one where it looks at the actual interactions.”*

*“the expectations are clear, and if followed, a quality program is the result and is shown in the STARS recognition process.”*

Providers whose programs earned a higher STARS level were more likely to agree that the STARS recognition process was accurate compared to providers whose programs earned a lower level. For example, see the pull-out box for a quote from a five star provider.

**Figure 1-5. Impressions of Vermont STARS accuracy, by STARS level**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

### **Experiences with Vermont STARS implementation**

Providers largely agreed (87%) that the practices recognized by STARS aligned with what they believed are high-quality practices in ECE programs. Many providers (86%) agreed that the primary purpose of STARS is to help programs improve their quality, while fewer (77%) agreed that the primary purpose of STARS is to rate the quality of programs. Fewer yet (53%) agreed that the primary purpose of STARS is to share information with parents about the quality of programs.

Many providers (77%) agreed that STARS had been beneficial to their programs and helped to improve their programs (67%). Over three-quarters of providers (76%) agreed that they had made changes to their programs as a result of joining STARS. In addition, most providers (79%) agreed that they would recommend that other programs join STARS.

Most providers (70%) agreed that their experience with STARS has been what they expected. A large majority of providers (82%) agreed that they know what is expected of them in STARS. Just over half of providers (53%) agreed that their mentor helped them understand the STARS requirements, and slightly more than a quarter (27%) agreed that their mentor had sufficient time to work with them. Over half of providers (60%) agreed that they could find the professional development training they need and that their staff were able to find the professional development training they need (60%).

Two-thirds of providers (66%) working in center-based programs agreed that they talked to their staff about STARS. A similar number (65%) agreed that their staff understood the purpose and goals. Fewer providers (54%) agreed that their staff understood the distinctions between the levels in STARS or recognize what the program is currently doing to attain the next level (60%).

### **Providers' opinions about marketing strategies**

Almost two-thirds of providers (63%) agreed that STARS had been beneficial to the families their program served. Three-quarters of providers (75%) told families in their program about STARS, and two-thirds (67%) displayed the marketing materials given to them by STARS. Only half of providers (50%) agreed that families were more likely to choose their program because they joined STARS.

Almost all providers (93%) agreed that parents should consider a program's quality when choosing child care for their child. Comparatively, about two-thirds (68%) agreed that parents should consider a program's STARS level when choosing child care for their child. More providers (72%) than parents (64%) agreed STARS levels were useful to early care and education programs.

## STARS recognition process and structure

Over half of providers (58%) agreed that the STARS application was easy to complete. Over a quarter of providers (26%) disagreed that the STARS application was easy to complete, and some providers (16%) were neutral about this statement.

When asked to comment, one-third of providers (32%) felt changes to the application process were needed. Of providers who reported that changes were needed, over half (58%) felt the application needed to be simplified, such as shortening it or offering it online. Others (27%) simply felt the application was too confusing.

Two-thirds of providers (67%) agreed that the current STARS level their program received accurately reflects their program’s quality. Many providers (71%) agreed that they knew what they needed to do to get the level they wanted. A similar amount (70%) agreed that the due dates within STARS give enough time to complete the necessary paperwork.

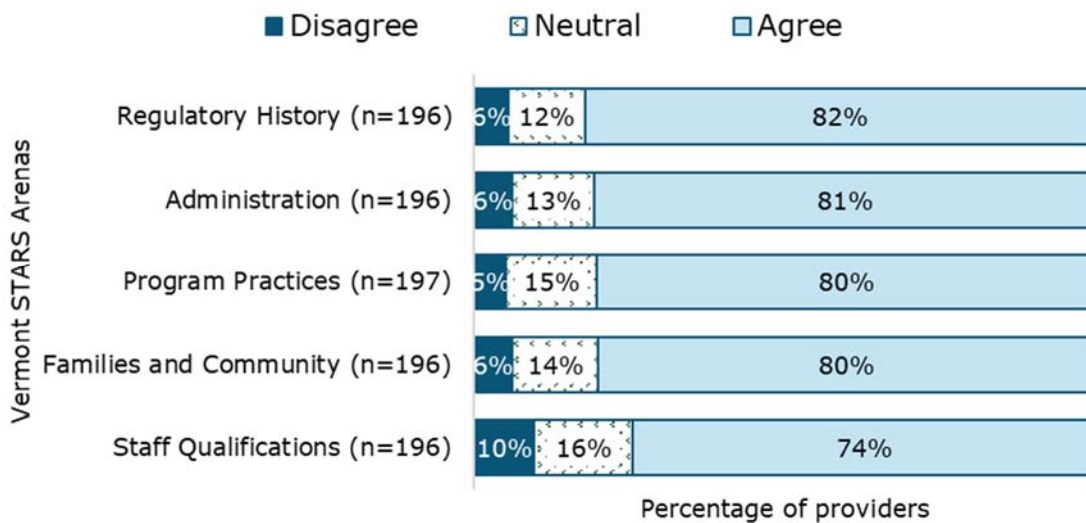
A large majority of providers (88%) agreed that it was important for their program to have flexibility to choose where to focus quality improvement efforts within the STARS quality arenas. Fewer (62%) agreed that all programs at a STARS level should represent the same aspects of quality across the STARS arenas.

Almost all providers (91%) agreed that they planned to maintain their participation in STARS when their current certificate expires.

## What did providers think of STARS arenas?

Providers were asked questions about their perceptions of the Vermont STARS arenas. Over 80 percent of providers agreed that the criteria in the Regulatory History, Families and Community, Program Practices, and Administration arenas were an appropriate set of requirements to represent program quality. Three-quarters (74%) agreed the criteria in the Staff Qualifications arena were appropriate (see Figure 1-6).

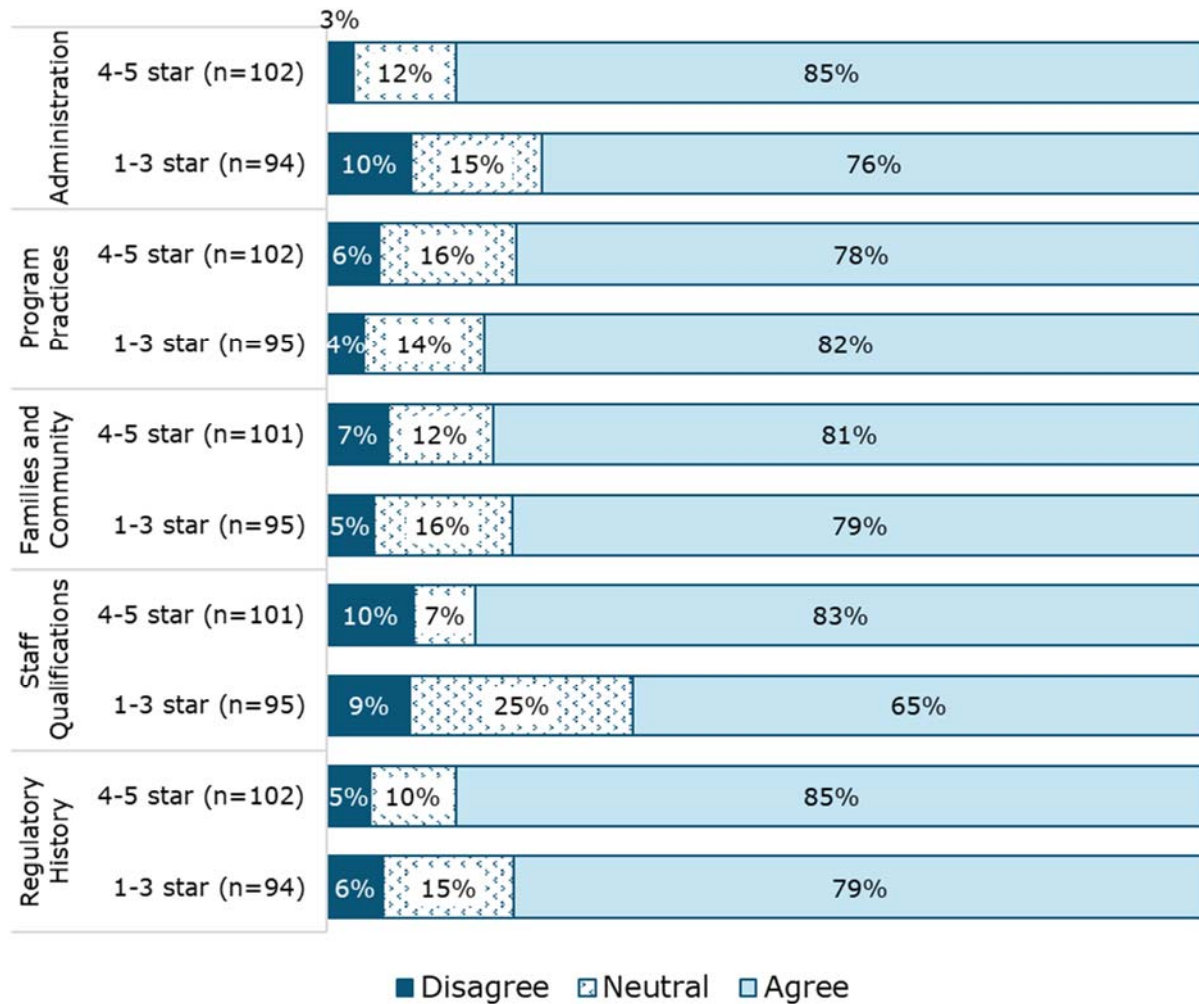
**Figure 1-6. Providers’ impressions of the appropriateness of the arenas**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

Providers' perceptions of the Vermont STARS arenas were also examined by star level. Fewer providers (65%) whose programs earned lower levels (one through three) agreed that the criteria in the Staff Qualifications arena were appropriate compared to providers whose program earned higher levels (four and five; 83%). Other differences can be seen in Figure 1-7.

**Figure 1-7. Providers' impressions of the appropriateness of the arenas by star rating**

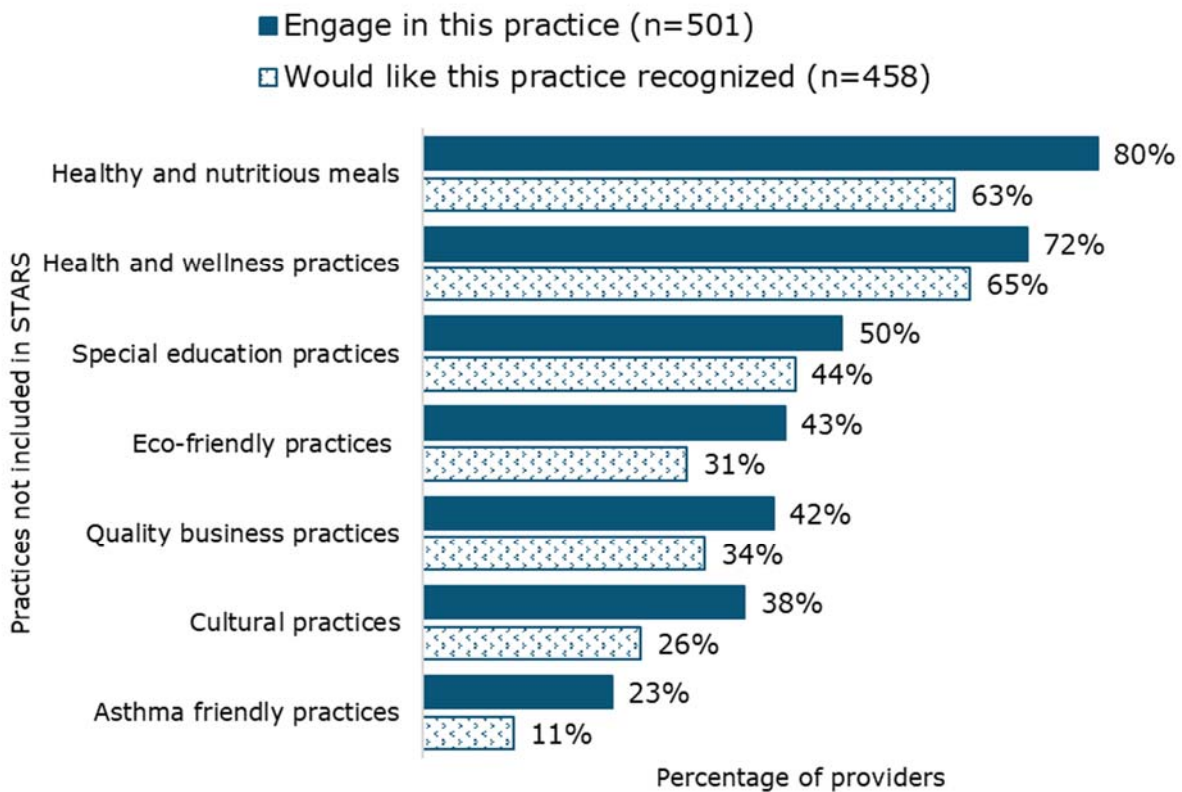


Source: Child Trends Vermont STARS Provider Survey, Spring 2016

### Practices not recognized in the STARS arenas

Providers were asked about other practices that they engaged in that were not currently represented in the STARS arenas and if they were interested in having those practices recognized in the STARS system. Overall, more providers (50%) reported engaging in practices than were interested in having those practices recognized by the STARS system (39%; see Figure 1-8). A large majority of providers (80%) reported engaging in practices related to healthy and nutritious meals and health and wellness practices (72%). About two-thirds of providers were interested in having these practices recognized by STARS (63% and 65%, respectively). Half of providers (50%) reported engaging in practices related to special education. A similar amount (44%) were interested in having these practices recognized by STARS.

**Figure 1-8. Percent of providers who engage in and would like recognized practices that are not included in STARS**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016



## Where did providers focus on quality improvement within STARS arenas?

Providers were asked on which arenas they were currently focusing their quality improvement efforts or on which they planned to focus their quality improvement efforts in the future. Over three-quarters of providers (80%) reported focusing or planning to focus on the Families and Community arena. Many providers (73%) were focusing or planned to focus their quality improvement efforts on the Program Practices arena. Over half of providers (58%) reported focusing or planning to focus on the Staff Qualifications arena. Over half of providers (54%) reported focusing or planning to focus on the Regulatory History arena. Half of providers (50%) reported focusing or planning to focus on the Administration arena.

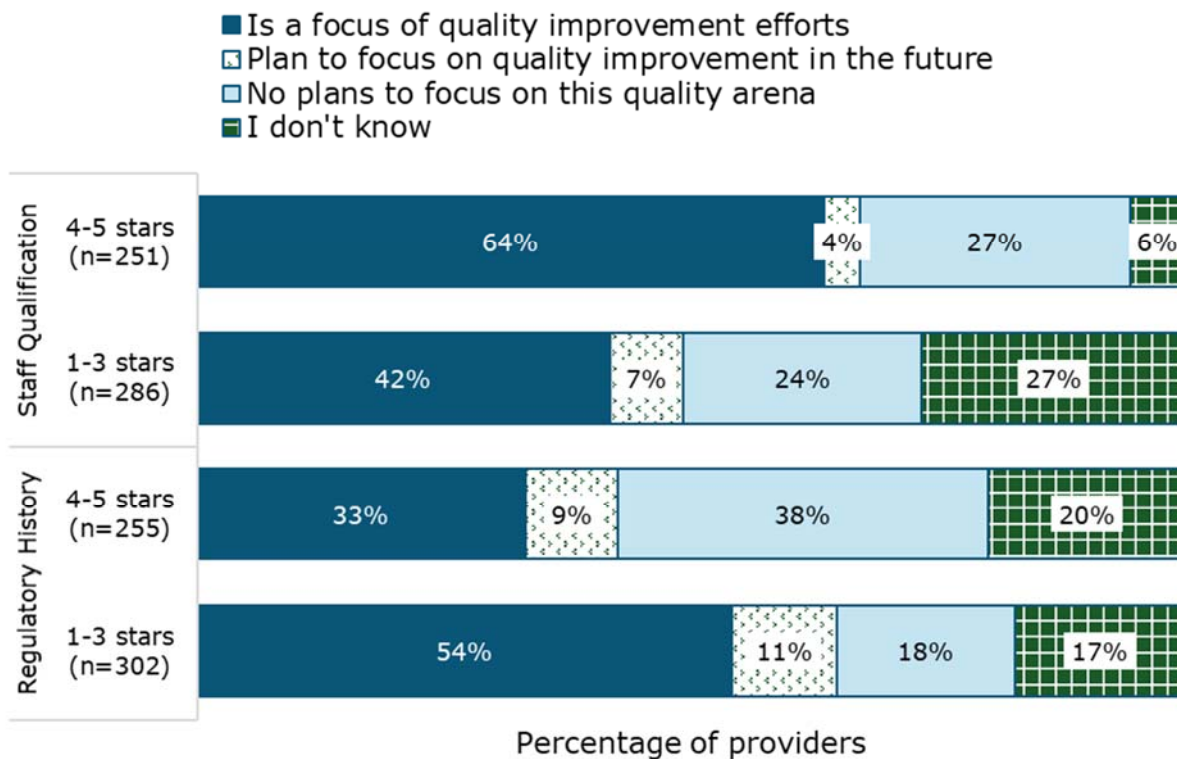
**Table 1-3. Providers’ responses to reasons they planned to focus or did not plan to focus on each STARS arena**

Arena	Focusing or planning to focus on quality improvement in this arena: How has this arena benefited your program?	Not planning to pursue quality improvement in this arena: Why not?
<b>Families and Community</b>	“I feel it has brought my families and I closer. We have a very open dialogue which has been developed through this arena.”	“The staff is working hard during the day, so asking for more community participation is beyond what we can expect right now.”
<b>Program Practices</b>	“This arena has helped me recognize the importance and impact my program practices have on the development of young minds and bodies.”	“I don't believe in a lot of the elements within the Environmental Rating Scales. I find the number of items to be overwhelming and overstimulating for children and I really would like an emphasis on the interactions rather than how many of various items are present for the majority of the day.”
<b>Staff Qualifications</b>	“Having qualified staff has greatly improved our program with classroom set ups, program planning, and children interactions.”	“Our current staff happens to be highly qualified and regularly seeks out professional development and community involvement.” - CBCCPP “I am a home provider; do not have staff.” - FCCH
<b>Regulatory History</b>	“The focus on regulatory history reminds our program to continually look at the regulations and to make sure that we are following them.”	“I've always stayed in compliance with all regulations, but it isn't something I focus on specifically for STARS.”
<b>Administration</b>	“I find myself much more professional now because of it.”	“...the amount I charge my families does not allow me to give my staff a pay raise.”

Source: Child Trends Vermont STARS Provider Survey, Spring 2016

Providers' focus on quality improvement efforts in the Staff Qualifications and Regulatory History arenas differed by star level (see Figure 1-9). Providers whose programs earned levels one through three focused more on the Regulatory History arena than providers earning four or five stars, and providers whose programs earned levels one through three focused less on the Staff Qualifications arena than providers whose programs earned four through five stars.

**Figure 1-9. Focus on quality improvement efforts in the Staff Qualifications and Regulatory History arenas by star level**



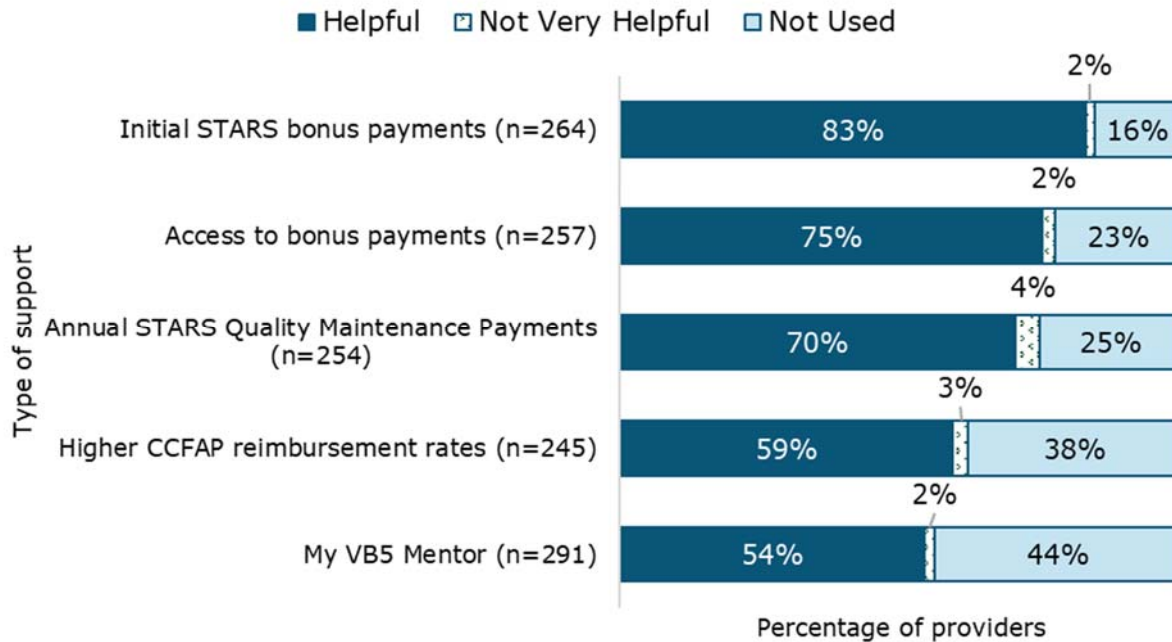
Source: Child Trends Vermont STARS Provider Survey, Spring 2016



## STARS supports

Providers were asked which STARS supports they used and to rank the helpfulness of various STARS supports. The three supports rated as most helpful were related to STARS payments (see Figure 1-10). Eighty-three percent of providers rated the initial STARS bonus payments as the most helpful support reporting it was “extremely helpful” or “somewhat helpful.” Three-quarters of providers (75%) rated access to bonus payments as helpful, and slightly fewer (70%) rated annual STARS quality maintenance payments as helpful. Over half of providers (59%) rated higher CCFAP reimbursements rates as helpful. More than half of providers (54%) rated their VB5 Mentor as helpful.

**Figure 1-10. Providers’ perceptions of the degree of helpfulness of STARS supports**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

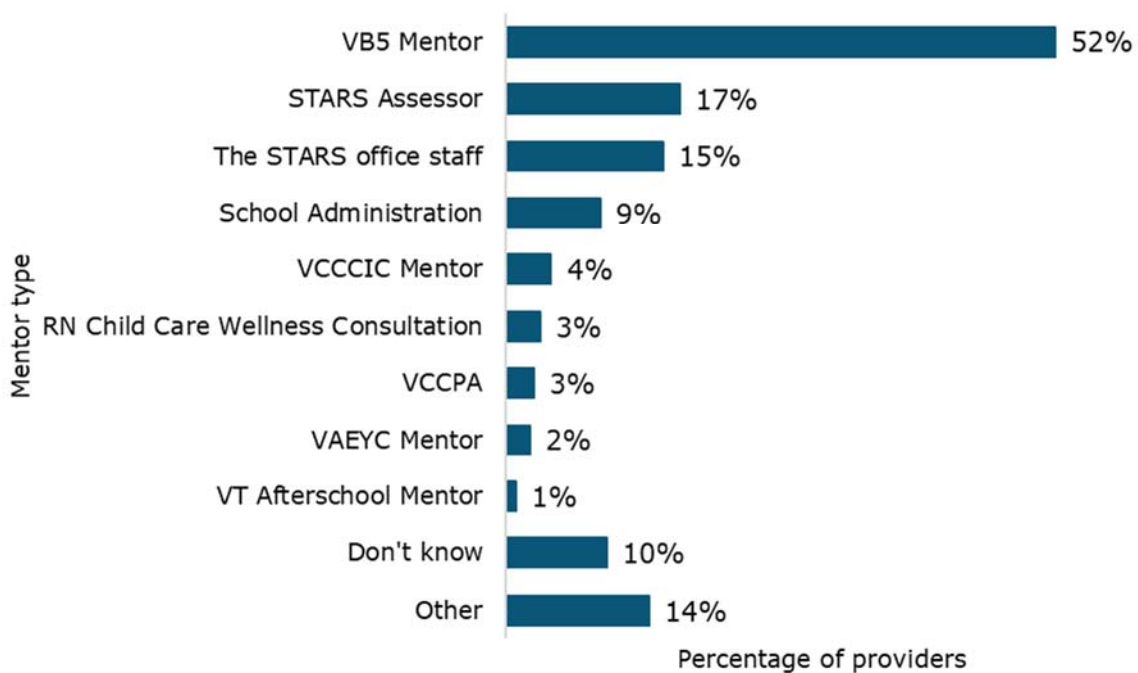
## What did providers think of STARS mentors?

Providers were asked about the mentors with whom they worked since enrolling in STARS. Over half of providers (64%) reported working with a mentor; the remaining 36 percent reported they had never worked with a mentor. Among the providers who had worked with a mentor, 45 percent reported working with the same individual over time, 15 percent had worked with two mentors, three percent had worked with three, and one percent had worked with four or more mentors since enrolling in STARS. Of those who reported working with one or more mentors, a majority (61%) worked with their mentor for longer than six months. Some providers (16%) reported working with a mentor for one to two months, three to four months (9%), or five to six months (6%).

Providers were also asked with what type of mentor they worked, since mentors who support providers with STARS may represent different mentor programs. Providers also reported how many hours per visit each type of mentor spent with them on average.

A majority of providers (52%) reported that they worked with a Vermont Birth to Five (VB5) mentor. Providers on average spent 2.8 hours per visit with their VB5 mentor. Some providers (17%) reported that they worked with a STARS assessor (i.e., the STARS staff members who conduct ERS observations) as a mentor. On average, providers reported that they spent 2.4 hours with their STARS assessor. Other types of mentors were less common (see Figure 1-11).

**Figure 1-11. Percent of providers who worked with certain mentor types**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

### Mentorship of center-based teachers

Providers working in center-based programs were also asked about mentorship of the teachers in their program. Providers also reported how many hours per visit their mentor spent with their teachers on average, if their teacher received mentorship from STARS.

Providers working in center-based programs reported that about a quarter of teachers (23%) worked with a VB5 mentor. On average, providers reported that their teachers spent 5.7 hours on average with their VB5 mentor per interaction.

Providers reported that some (19%) of their teachers worked with a STARS assessor as a mentor. Providers reported that they spent 1.9 hours on average with the STARS assessor per visit. Other mentor types were less common among all providers and center-based teachers.

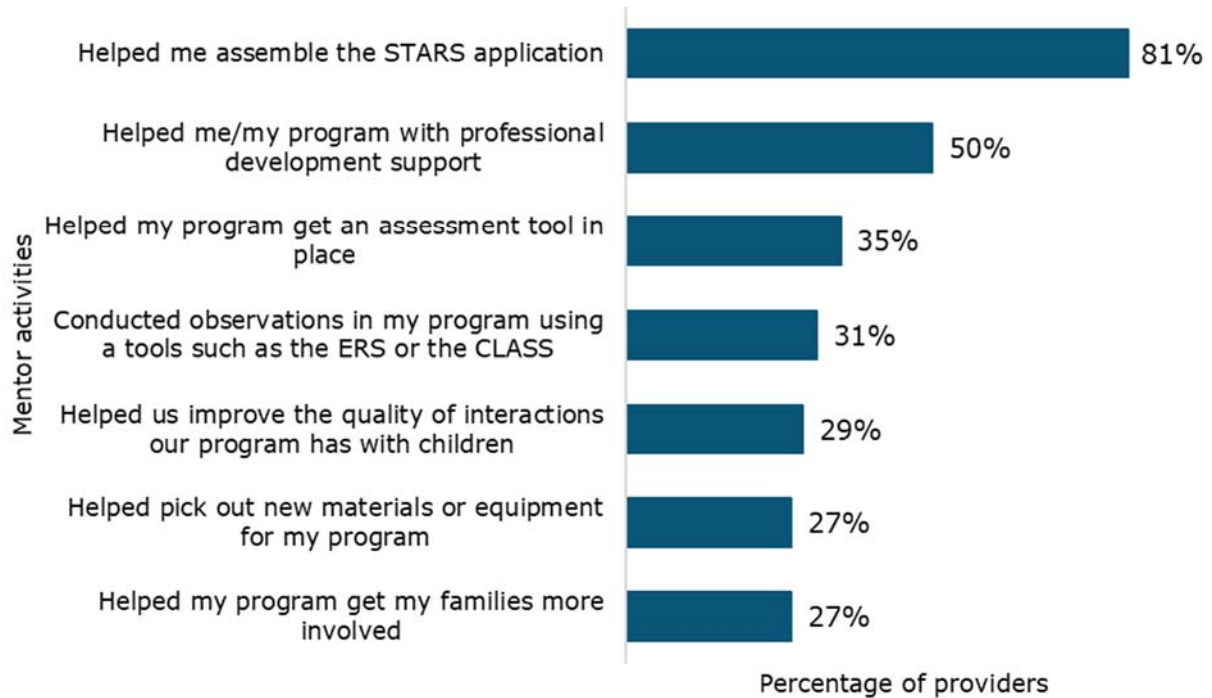
Providers reported that their teachers worked with the school administration (16%) or a VCCCIC mentor (15%). Providers reported that center-based teachers spent 5.5 hours with the school administration mentor. Providers reported that center-based teachers spent 3.9 hours on average with a VCCIC mentor.

## Activities worked on with mentors

Providers were asked about the top three types of activities they worked on with their mentor. A majority of providers (81%) reported that their mentor assisted them with their STARS application.

Many providers (50%) reported that their mentor helped them or their program with professional development. A third of providers (35%) reported that their mentor helped their program put an assessment tool in place. Other activities such as picking out new materials for their program or helping the program get families more involved were less common (see Figure 1-12).

**Figure 1-12. Percent of providers who worked on certain activities with their mentors**



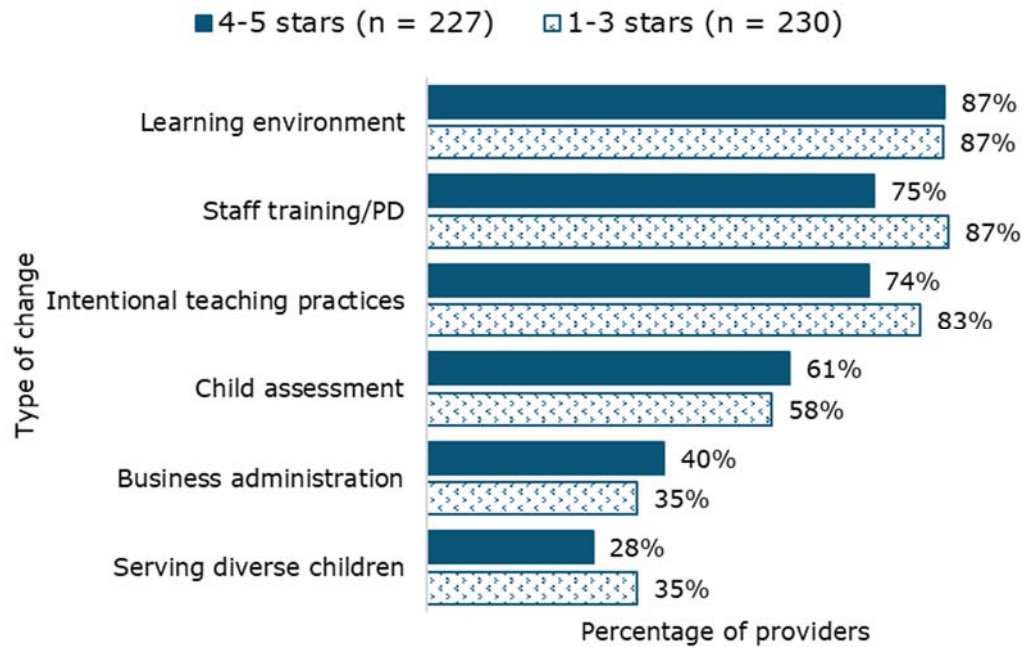
Source: Child Trends Vermont STARS Provider Survey, Spring 2016

## What changes did programs make as a result of joining STARS?

Providers were asked to reflect on the changes they made as a direct result of joining STARS. The changes were grouped into general themes (see Figure 1-13). The most common type of change that providers made was to the learning environment of their program (87%). The second most common change was to staff training or professional development (81%), followed by intentional teaching practices (78%).

More providers at lower STARS levels (levels one through three) reported making changes related to staff training or professional development, intentional teaching practices, and serving diverse children. Conversely, providers at higher STARS levels (levels four and five) reported making slightly more changes related to child assessment (61% versus 58%) and business administration (40% versus 35%).

**Figure 1-13. Changes made as a direct result of joining STARS grouped by theme and STARS level**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

Providers were asked to select the most important change, the hardest change, and the change with the biggest benefit to children, families, and teachers regarding the changes they have made since joining STARS (see Figure 1-14).

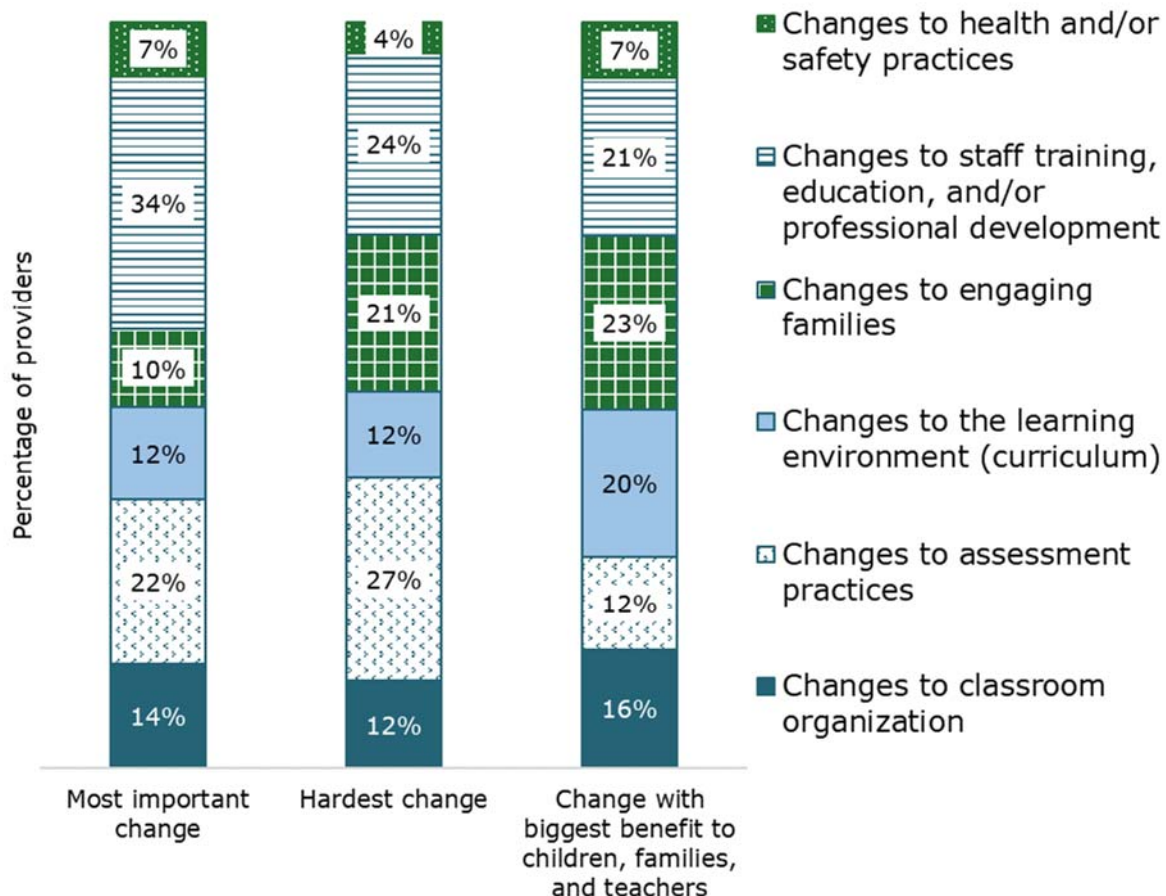
Providers reported that the most important changes were related to staff training, education, and/or professional development (34%). Fewer providers (24%) believed these types of changes to be the hardest change they made or the change with the biggest benefit to children, families, and teachers (21%).

Almost a quarter of providers (22%) reported that changes to child assessment practices were the most important change they made. More providers (27%) reported this type of change to be the hardest change they made, and few (12%) believed this change to be the biggest benefit to children, families, and teachers.

While few providers (10%) rated changes to engaging families as the most important change they made, more (21%) believed it to be the hardest change and reported it was the change with the biggest benefit to children, families, and teachers (23%).

One-fifth of providers (20%) rated changes to the curriculum as the change that most benefitted children, families, and teachers. Fewer providers (12% each) rated this change as the most important or the hardest.

**Figure 1-14. Percent of providers who reported each type of change as most important, hardest, or the change with the biggest benefit to children, families, and teachers**



Source: Child Trends Vermont STARS Provider Survey, Spring 2016

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## Chapter 2

# Mentors' Perceptions of Vermont STARS quality framework and quality improvement supports

### Mentor Survey

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## Purpose of this chapter

The goal of the analysis presented in this chapter was to learn more about the mentors who work in the STARS recognition system. Mentors were asked about their background and work, perceptions of the STARS system, and feedback about how to improve STARS.

## Contents

1. Method
2. What supervision and support did mentors receive?
3. How did mentors work with providers?
4. What was the content of mentoring?
5. What strategies did mentors use to engage with providers?
6. How did mentors assess themselves?
7. What were mentors' perceptions of STARS?
8. What did mentors think of the STARS arenas?

## Summary of findings

- Sixty-seven percent of mentors had a supervisor, mentor, or coach, and 83 percent agreed that they felt supported by their supervisor in their role as a mentor. All mentors (100%) formally met or talked with other mentors on a varying basis.
- When asked about their work with providers, 53 percent of mentors reported that they had no formal plan for mentoring providers. Fifty-three percent of mentors reported that their approach was flexible and provider-led. In addition, 37 percent of mentors did not communicate with providers in their caseload on a set schedule. When they did communicate with providers, the most common methods mentors used were face-to-face meetings (44%) and e-mails (33%).
- During face-to-face meetings, mentors reported spending 2.1 hours on average with the typical provider. When asked about the amount of time they spent with other staff members at their sites, 56 percent of mentors reported spending between one and two hours with lead teachers and less than one hour (60%) with other individuals, if applicable.
- Eighty-nine percent of mentors reported that documentation was needed for their role, and 42 percent of mentors reported entering documentation after every visit.
- When asked to rank the most important activities mentors completed with providers, the top three activities included assessing providers' strengths and areas of growth (82%), goal setting (53%), and observing and giving feedback (47%).
- When asked about the top three activities on which they spent the most time with providers, 48 percent of mentors reported spending time on understanding STARS and completing the application, and 38 percent reported spending time on providing resources about professional development. Thirty-seven percent of mentors based their priorities on the interest of the provider when selecting activities.

- Ninety-two percent of mentors used relationship building to engage with providers, and all mentors (100%) used goal setting as a strategy with providers. Fifty-eight percent answered questions, 58 percent encouraged reflection, 34 percent reviewed paperwork, 34 percent observed, and 34 percent gave feedback.
- When asked what the most effective strategy they used to engage providers was, 42 percent of mentors reported relationship building followed by encouraging reflection (32%) and giving feedback (11%).
- Eighty-three percent of mentors measured their success based on the relationships and rapport they built with providers. All mentors (100%) agreed that they knew how to build collaborative relationships with providers and were trusted by providers as a source knowledgeable about child care quality (100%). Ninety-five percent of mentors enjoyed working with providers in their caseload.
- Thirty-seven percent of mentors believed they were recognized for the work they did to improve child care quality.
- Sixty-seven percent of mentors reported having completed the M.A.T.C.H Self-Assessment tool. Of those who did, 83 percent agreed that completing the assessment was a valuable experience, and all agreed that the tool was somewhat or very beneficial to their practice.
- Fifty-eight percent of mentors believed that the STARS recognition process was fair, and 44 percent believed that the STARS recognition process was an accurate reflection of program quality.
- Sixty-three percent of mentors believed that the Program Practices arena contributed most to program quality, and 67 percent believed that health and wellness and special education practices should be recognized by STARS, followed by healthy and nutritious meals (53%), cultural engagement (47%), and eco-friendly practices (47%).



## Method

The survey was distributed via Survey Monkey, an online survey platform, in spring 2016 and was open for five weeks. The survey included fixed-choice, check-all-that-apply, and open-ended questions. The e-mail addresses of mentors were obtained from agencies that partnered with STARS to provide mentoring services. As a thank you for completing the survey, Child Trends randomly drew survey participants to receive incentives. Out of 51 mentors who were sent the survey, 25 completed it (49% response rate).

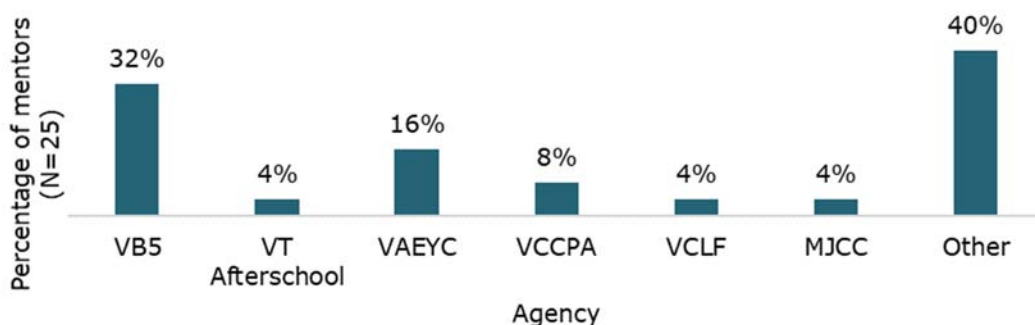
## Characteristics of survey respondents

Mentors were asked questions about themselves and their jobs. All mentors (100%) surveyed were female and White/Caucasian; one mentor selected both “White/Caucasian” and “Other” as their race. Almost half of mentors (44%) had a bachelor’s degree and over a quarter (28%) had a graduate or doctorate degree. Fewer mentors had an associate degree (11%) or some college but no degree (17%). Almost half of mentors (44%) majored in early childhood education or child development, and many (40%) majored in relevant fields such as K-12 education, human services/social work, or psychology. Over one-third of mentors (39%) had a CDA.

Mentors had diverse prior and current work experiences. An equal percentage of mentors (40%) had spent one to five years mentoring and more than 10 years mentoring. Most mentors (72%) were an early childhood provider before becoming a mentor, and about a quarter had been an early childhood administrator (28%) or had other early childhood experience (24%). Those who were working in an additional role other than mentoring reported mostly working in early childhood as a teacher/provider (32%), administrator (28%) or another role (44%). Some mentors (12%) worked in a field unrelated to early childhood. Few mentors (12%) were not currently working in an additional role.

Over half of mentors (58%) reported receiving training on STARS. Mentors cited a variety of education/training that prepared them best for their role, including almost a third (29%) reporting professional development/training taken while employed as a mentor and one-third (33%) stating that the best preparation were classes taken to obtain their degree. Some mentors (17%) cited prior experience as a mentor as the best preparation for their current role. While almost a third (32%) were employed as a mentor by VB5, the agencies employing mentors varied (see Figure 2-1).

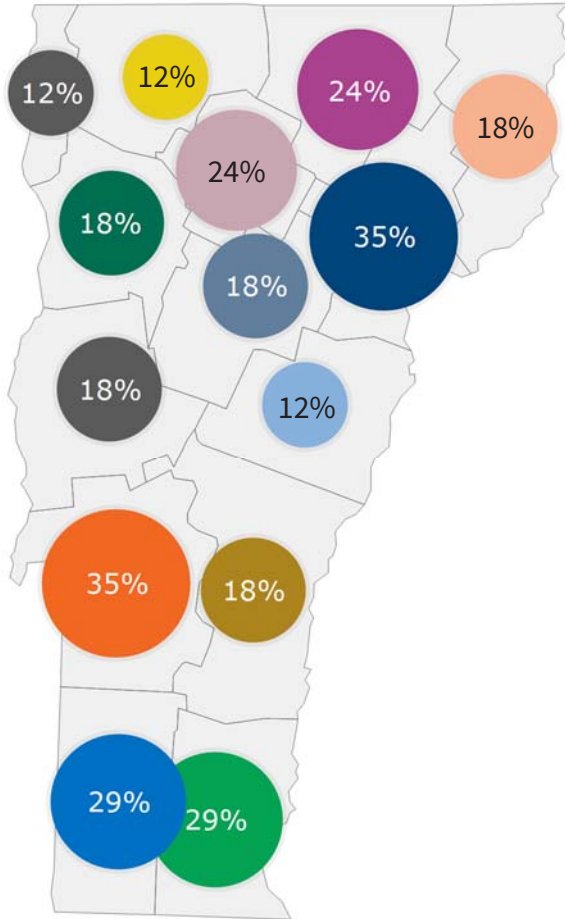
**Figure 2-1. Percentage of mentors who worked for various agencies in Vermont**



Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

Mentors were asked about the counties in which they served providers (see Figure 2-2). Over one-third of mentors (35%) reported servicing Rutland and Caledonia counties. The least commonly reported counties for mentors to service were Orange, Franklin, and Grand Isle (12% each).

**Figure 2-2. Distribution of mentor service areas across counties**



Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

## What supervision and support did mentors receive?

Two-thirds of mentors (67%) had a supervisor, mentor, or coach. Mentors cited that their supervisor filled a variety of roles, most commonly related to the mentor's professional development (47%) or acting as a business manager (37%).

Over half of mentors (58%) met with their supervisor once per month and on average, mentors reported spending 3.9 hours per month with their supervisor. The topics of these meetings varied; mentors reported discussing access to community resources (67%), consultation strategies (67%), and STARS related topics (58%) the most. Most mentors (83%) reported receiving feedback on their services as a mentor from their supervisor and reported agreeing or strongly agreeing that they felt supported by their supervisor in their role as a mentor (83%).

All mentors (100%) reported formally meeting or talking with other mentors. Mentors reported that these meetings took place on a varied basis such as once per month (33%), quarterly (33%), or twice per year (33%). At these meetings, mentors mostly reported discussing consultation strategies (83%) and STARS related topics (75%).

## How did mentors work with providers?

Mentors were asked questions about working with providers and case management. Over half of mentors (53%) reported that they had no formal plan for mentoring providers, while the remainder (47%) reported having a formal plan for mentoring providers. When asked how they customized their approach to working with providers in different settings, over half of mentors (53%) reported their approach was provider-led and that they were flexible to what providers needed support with on a given day. Some mentors also

*"I am very adaptable and flexible. I do not have a one-size-fits-all approach. I show up with many tools, but let providers lead me and show me what they need most support with."*

noted they were flexible in where and when they met (e.g., at their homes, in the mentor's office, or at a coffee shop). See the pull-out box for an example comment from a mentor.

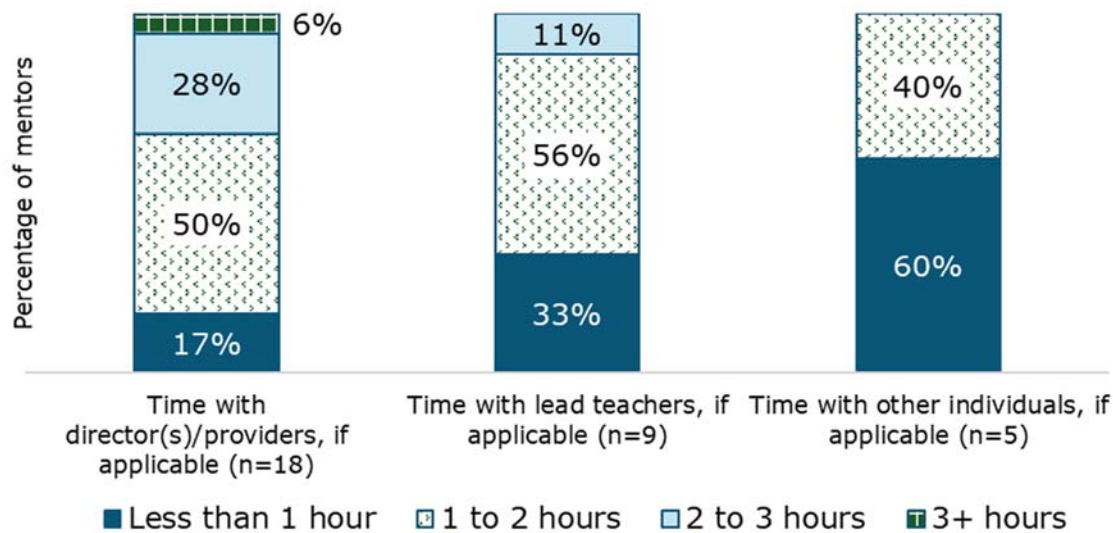
Over one-third of mentors (37%) did not communicate on a set schedule with their providers. Some mentors communicated with providers in their caseload once per week (21%) or twice per month (21%), while some (16%) communicated once per month and few (5%) communicated twice or more per week.

The most common mode of communication mentors used with their providers was face-to-face meetings (44%), followed by e-mails (33%), phone calls (17%), and other forms of communication (6%).

On average, mentors reported spending 2.1 hours on-site with providers during a face-to-face visit. Of mentors who reported spending time with director(s)/providers during their visit, half (50%) reported spending one to two hours with them, while slightly over one-quarter (28%) reported spending two to three hours with them (see Figure 2-3). Some mentors (17%) reported spending less than one hour with director(s)/providers, and few mentors (6%) reported spending three or more hours with them.

Of mentors who spent time with a lead teacher during their visits, over half (56%) reported spending one to two hours with them, while a third (33%) reported spending less than an hour. Some mentors (11%) reported spending two to three hours with lead teachers. Of mentors who spent time with other individuals during their visits, over half (60%) spent less than one hour with these individuals, and the remainder (40%) spent one to two hours with these individuals.

**Figure 2-3. Time mentors spent with various program staff members, if applicable**



Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

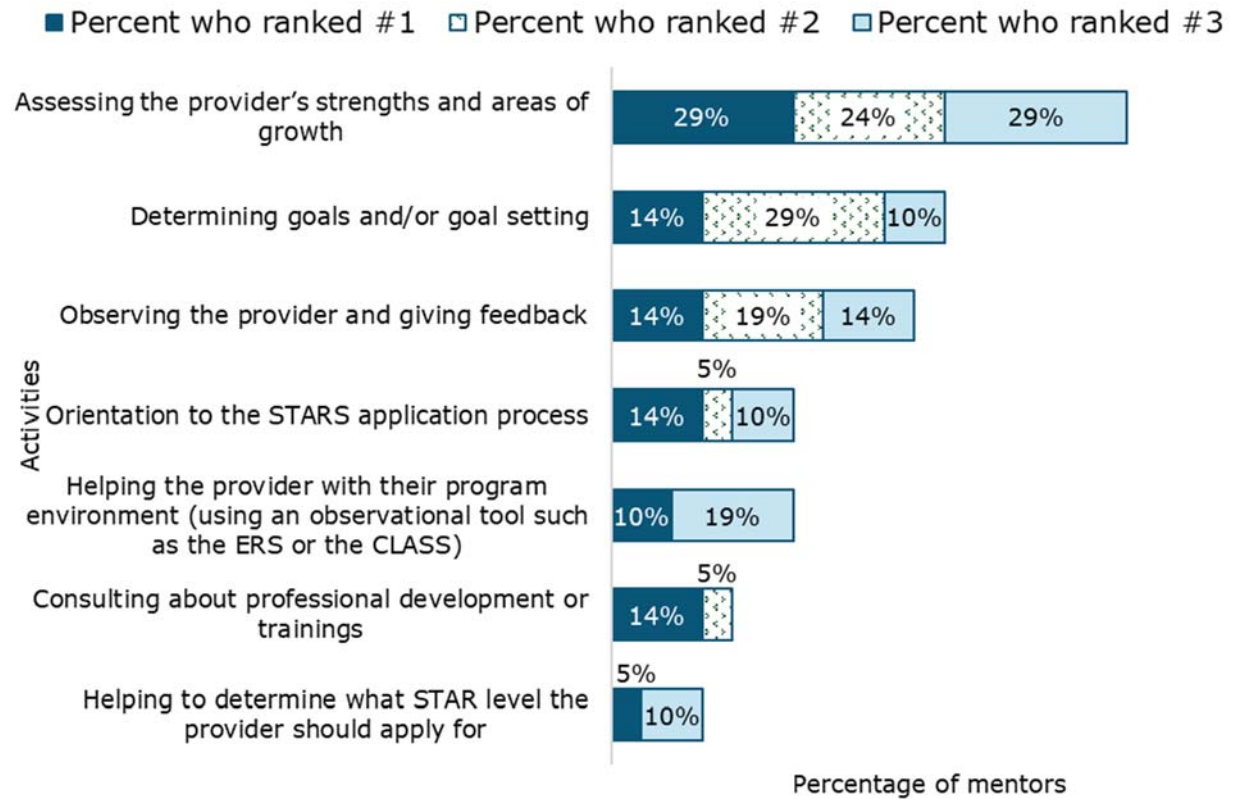
The majority of mentors (89%) reported that documentation was needed for their role. Almost half (42%) reported entering documentation after every visit with providers. Almost one-quarter (21%) reported entering documentation as needed, and fewer reported entering documentation monthly (16%) or weekly (11%).

When asked how they documented their visits, almost all mentors (94%) reported that they kept a call log with notes. Some mentors (30%) also described entering notes into an online system such as *Civicore*, a data system for VB5.

## What was the content of mentoring?

When asked about the most important activities they completed with providers, most mentors (82%) ranked assessing strengths and areas of growth as one of their top three selections (see Figure 2-4). Over half of mentors (53%) selected goal setting as one of the top three most important activities. Almost half of mentors (47%) ranked observing and giving feedback as a top three most important activity completed with providers.

**Figure 2-4. Percentage of mentors who ranked certain activities with providers as the top three most important**

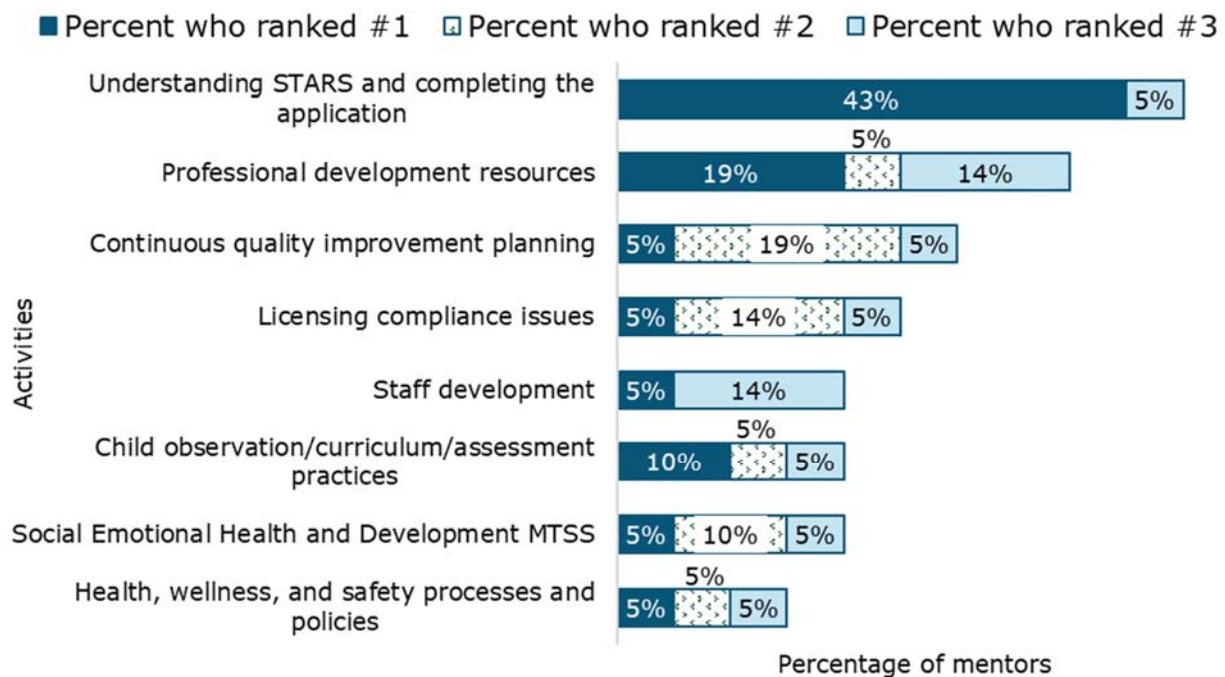


Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

When asked about the three most frequent activities they completed with providers, almost half of mentors (48%) reported helping providers understand STARS and complete the application as one of their selections (see Figure 2-5). Mentors also reported frequently spending time on helping providers with resources for professional development (38%) and assisting with continuous quality improvement planning (29%).

When asked to describe the work they do with providers in their own words, mentors reported supporting them in professional development (40%), completing the STARS application (40%), setting and achieving goals (25%), and connecting to other resources, such as assessment and observational tools (25%).

**Figure 2-5. Percentage of mentors who ranked certain activities with providers as the top three on which they spent the most time**



Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

Mentors were asked how they prioritized the activities they conducted with providers they mentored. The most common response (37%) was that it depended on the interests of the provider with whom they were working. Mentors explained that providers' interests were often based on the requirements of the STARS application, providers' goals, and professional development plans.<sup>d</sup> About one-quarter of mentors (26%) reported using the provider's quality improvement plan to inform their next steps. Some mentors reviewed the provider's most recent STARS application to guide the activities they conducted during mentoring or were guided by the organization for whom they worked (16% each). A small number of mentors (5%) used ERS or CLASS scores to identify goals.

<sup>d</sup> This option was coded from open-ended responses to the response option of "other."

## What strategies did mentors use to engage with providers?

Mentors reported the top three strategies they used to engage providers and the most effective strategy they used to engage providers. Almost all mentors (92%) used relationship building as a strategy with providers, and over half (58%) ranked this as the top strategy that they used (see Figure 2-6). All mentors (100%) cited goal setting as one of the three most used strategies with providers. Many providers reported frequently using strategies such as answering providers' questions (58%) and encouraging reflection (58%) with providers.

**Figure 2-6. Top three strategies mentors reported using with providers**

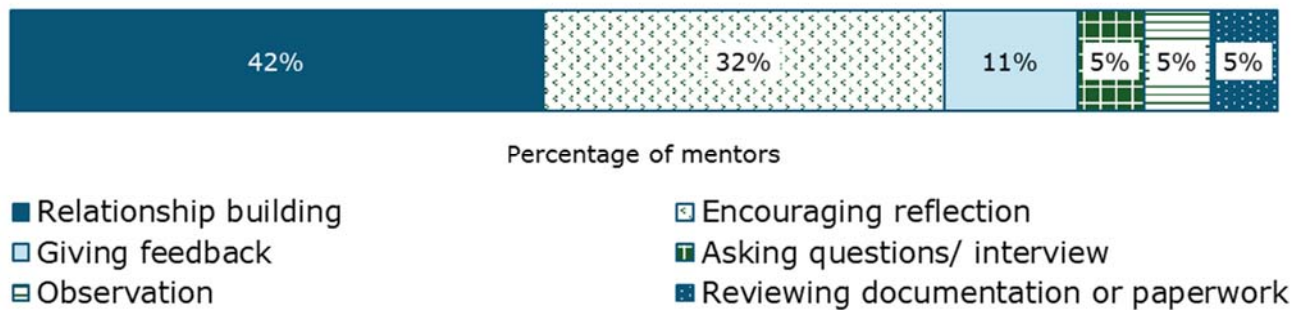


Source: Child Trends Vermont STARS Mentor Survey, Spring 2016



Almost half of mentors (42%) reported that relationship building was the most effective strategy they had used to support providers in improving their program quality, regardless if it resulted in an increase in points in STARS (see Figure 2-7). Almost one-third of mentors (32%) reported that encouraging reflection was the most efficient strategy, while some mentors (11%) reported that giving feedback was the most efficient strategy. Few mentors (5% each) reported that asking providers questions, observing, or reviewing documentation or paperwork was their most efficient strategy for engaging providers.

**Figure 2-7. Percentage of mentors who rated various strategies for working with providers as most effective**

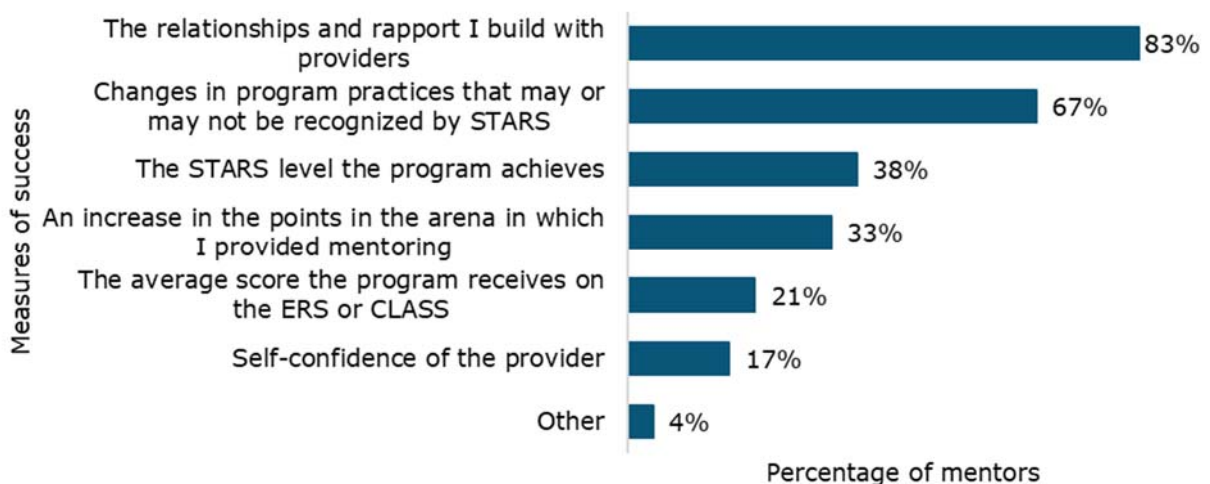


Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

## How did mentors assess themselves?

The majority of mentors (83%) measured their success based on the relationships and rapport they built with providers, while two-thirds (67%) measured their success based on changes in program practices, regardless if they were recognized by STARS. Over one-third of mentors (38%) measured their success based on the STARS level that the program achieved, and one-third (33%) based their success on an increase in points in the arena in which they had focused their mentoring. Other methods of measuring success as a mentor were not as common (see Figure 2-8).

**Figure 2-8. Percentage of mentors who reported ways of measuring their success in their role**



Source: Child Trends Vermont STARS Mentor Survey, Spring 2016



## What were mentors' perceptions of STARS?

Mentors were asked about their perceptions of their role in the STARS system. All or almost all mentors agreed that they knew how to build collaborative relationships with providers (100%), were trusted by providers as a source knowledgeable about child care quality (100%), and that they enjoyed working with providers in their caseload (95%). However, less than half of mentors (37%) agreed that they were recognized for the work they did to improve child care quality. Almost half of mentors (47%) felt neutral about this statement, and some mentors (16%) disagreed.

Most mentors agreed that they knew how to improve interactions between providers and children (95%) and how to observe and provide feedback to providers (89%). Most (89%) agreed that they helped providers meet their professional goals and that time spent with providers in their caseload was used efficiently. Over three-quarters (79%) agreed that providers they served had changed their practices as a result of working with them. Almost three-quarters (74%) agreed that they worked with providers for enough time to see improvements in their quality. Two-thirds (67%) agreed that they provided a lot of support to providers in helping them complete paperwork.

Almost all mentors (89%) agreed that participating in STARS was beneficial to the providers they served. Few mentors (5%) felt neutral or disagreed with this statement. In addition, about three-quarters of mentors (78%) agreed that providers increased their program quality by participating in STARS. Some mentors (17%) felt neutral about this statement, and few (6%) disagreed.

### **Experiences with the Mentoring Advising Teaching Coaching/Consulting Helping (M.A.T.C.H) Self-Assessment tool**

Mentors were asked about their experiences with the M.A.T.C.H. Self-Assessment tool. This is a tool M.A.T.C.H professionals can use to assess their strengths and opportunities for continued development in five core professional competency areas identified by the M.A.T.C.H mentor framework.

Two-thirds of mentors (67%) reported having completed the M.A.T.C.H Self-Assessment tool. Of the mentors who completed the M.A.T.C.H Self-Assessment tool, all felt either somewhat (67%) or very (33%) confident in their ability to assess their own skills and abilities.

Most mentors (83%) who completed the M.A.T.C.H Self-Assessment tool somewhat or strongly agreed that the instructions were clear and easy to follow, that the self-assessment helped them reflect on their skills and abilities, and that completing the assessment was a valuable experience. Few mentors (17%) felt neutral about these statements, and no mentors disagreed. Overall, all mentors believed that the M.A.T.C.H Self-Assessment tool was somewhat (60%) or very (40%) beneficial to their practice.

Of the mentors who completed the M.A.T.C.H Self-Assessment tool, most mentors (86%) reported using the results to further develop competency in the *Standards, Resources, and Systems* knowledge area. Over half have reported using the results to further develop their competency in the *Ethical Guidelines and Professionalism* knowledge area. Less than half (43% each) reported using the results to further develop their competency in the *Facilitating Growth, Relationship Building, and Effective Communication* knowledge areas.

## Fairness and accuracy of the STARS recognition process

Over half of mentors (58%) believed that the STARS recognition process was fair. Some mentors (16%) disagreed that the process was fair, and over one-quarter (26%) answered “don’t know” when asked this question (see Figure 2-9).

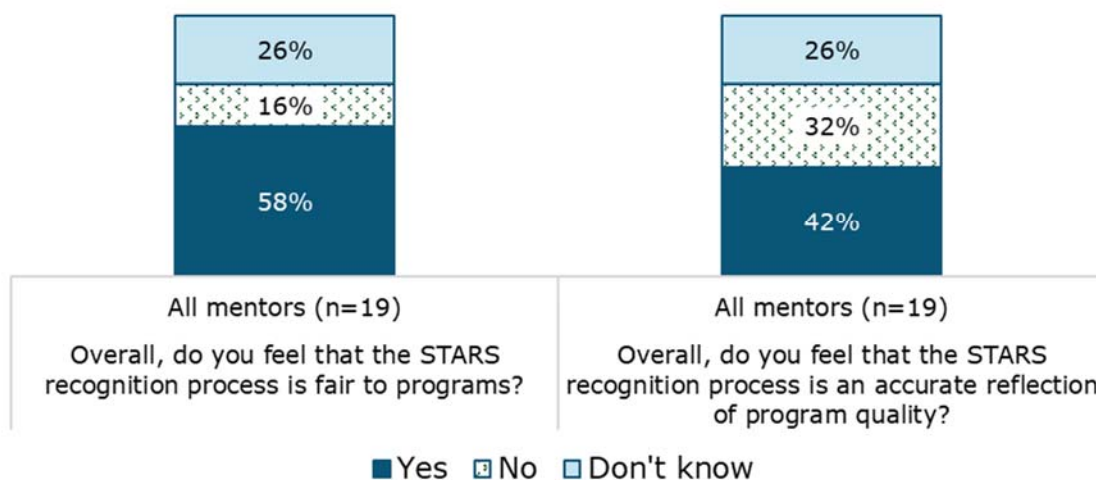
*“STARS needs to be consistent in its requests for documentation and become more of a level playing field for all providers.”*

When mentors were asked how the STARS recognition process could be fairer, they reported consistency across all program types would benefit the system (see pull-out box for example comment).

Less than half of mentors (44%) believed that the STARS recognition process was an accurate reflection of program quality (see Figure 2-9). Almost one-third of mentors (32%) disagreed that the process was an accurate reflection of program quality, and about one-quarter (26%) responded “don’t know” to this statement.

When asked how the STARS recognition process could be improved to more accurately reflect program quality, half of mentors (50%) reported that there should be more oversight of the recognition process and that the process should be more rigorous. One-third of mentors (33%) mentioned entering programs and observing interactions with children.

**Figure 2-9. Mentors’ overall perceptions of the STARS recognition process**



Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

Mentors were asked open-ended questions about the greatest strength of STARS and how STARS could be improved. Mentors reported the greatest strength of STARS was improving program quality (27%) and the recognition programs and providers receive (27%). A similar number of mentors (27%) described other reasons, such as the community support it fosters or the benefit to parents for tuition purposes. When asked how STARS could be improved, mentors reported interest in seeing the STARS application streamlined (39%; see example comment in pull-out box).

*“I would like to see the overall application process more streamlined - it is very daunting to fill out!”*

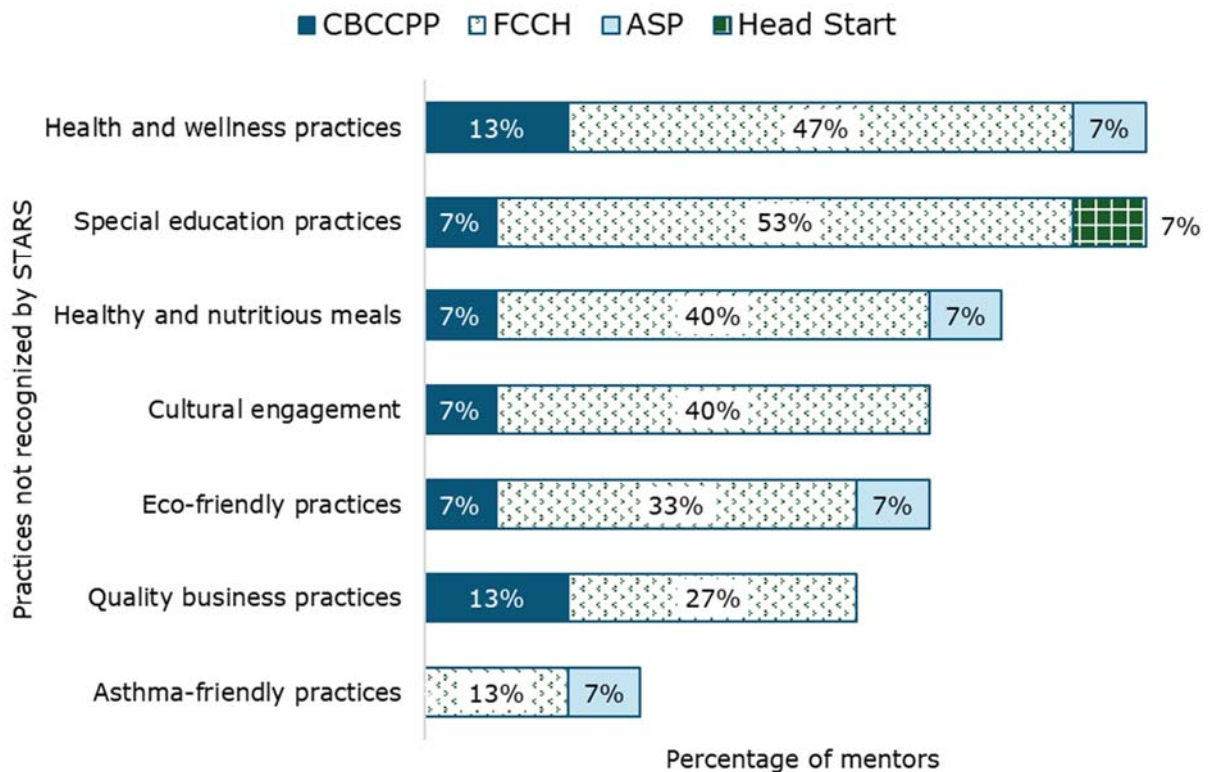
## What did mentors think of the STARS arenas?

Mentors were asked what STARS arena contributed the most to the quality of programs with whom they worked, regardless of the points the provider received in STARS. Most mentors (63%) reported that the Program Practices arena contributed the most to program quality. Some mentors (16%) reported that the Families and Community arena contributed the most to program quality, followed by the Staff Qualifications (11%), Administration (5%), and Regulatory History (5%) arenas.

## Practices not recognized by STARS

Mentors were asked about practices not currently included in STARS that they believed should be recognized, and if so, for what type of program (see Figure 2-10). About two-thirds of mentors (67%) believed that health and wellness and special education practices should be recognized by STARS. Over half of mentors (54%) believed that healthy and nutritious meals should be recognized by STARS, and almost half (47%) reported that cultural engagement and eco-friendly practices should be recognized. Many mentors (40%) believed that quality business practices should be recognized by STARS, and only some mentors (20%) reported that asthma-friendly practices should be recognized. A majority of mentors believed these additions to the system should be recognized for Family Child Care Homes (FCCHs) especially.

**Figure 2-10. Percentage of mentors that believed practices not currently recognized by STARS should be recognized by type of program**



Source: Child Trends Vermont STARS Mentor Survey, Spring 2016

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Chapter 3

# **Key Stakeholders’ Perceptions of the Vermont STARS quality framework and quality improvement supports**

Key Stakeholder Survey

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## Purpose of this chapter

The goal of the analysis presented in this chapter was to learn more about the key participants in the STARS system and their perceptions of STARS. Child Trends surveyed individuals involved with Vermont STARS or the Vermont early care and education system. Key stakeholders were asked about their relationship to Vermont STARS and their perceptions of the STARS system.

## Contents

1. Method
2. What were key stakeholders' perceptions of STARS?
3. What were key stakeholders' perceptions of the STARS arenas?

## Summary of findings

- Forty-nine percent of key stakeholders agreed that the STARS recognition process was an accurate reflection of program quality.
- Ninety-six percent of key stakeholders agreed they would recommend that programs join STARS; 84 percent believed that programs made changes because of STARS; and 83 percent agreed that STARS helped improve program quality. In addition, 87 percent of key stakeholders agreed that STARS was beneficial to families.
- Eighty percent of key stakeholders agreed the quality improvement supports provided to programs were meaningful, and 70 percent agreed the quality improvement supports were adequate.
- Seventy-eight percent of key stakeholders believed the STARS levels should represent uniform aspects of quality across all programs. Seventy-four percent believed it was important for programs to have flexibility to be able to choose where they focused their quality improvement efforts within the STARS arenas, and 78 percent believed that all programs at a certain STARS level should represent the same aspects of quality across the STARS quality arenas.
- Sixty-four percent of key stakeholders felt the requirements in the Program Practices arena greatly captured the most important aspects of high-quality early care and education, 54 percent felt the Families and Community Engagement arena captured quality, 53 percent felt the Staff Qualification arena captured quality, 44 percent felt the Administration arena captured quality, and 19 percent felt the Regulatory History arena captured quality.
- Key stakeholders largely agreed that practices related to health and wellness (85%), healthy and nutritious meals (85%), cultural engagement (83%), quality business (83%), special education (76%) should be recognized by STARS. Fifty-one percent agreed that asthma-friendly practices should be recognized by STARS. Forty-one percent of key stakeholders agreed that eco-friendly practices should be recognized by STARS.

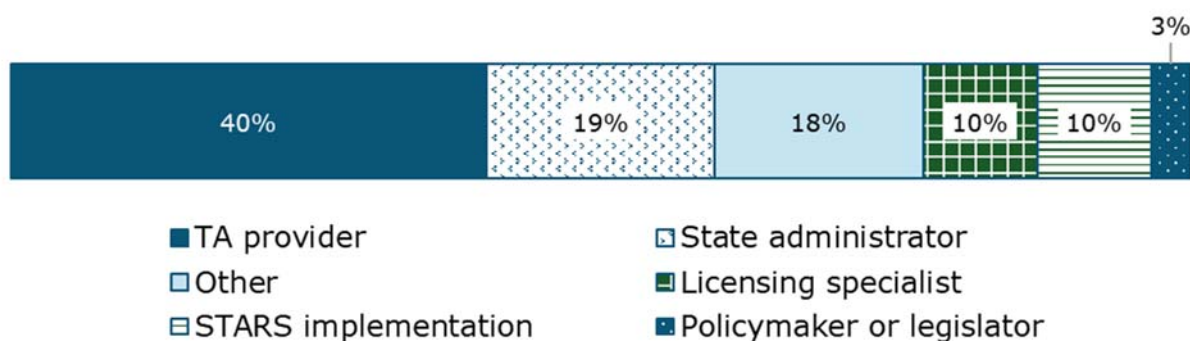
## Method

The survey was distributed via Survey Monkey, an online survey platform, in summer 2016 and was open for four weeks. The survey included fixed-choice, check-all-that-apply, and open-ended questions. Key stakeholders were contacted through information provided by the state. Out of 99 key stakeholders, 63 respondents completed the survey (64% response rate)

## Characteristics of key stakeholders

The STARS Evaluation Committee invited stakeholders of the STARS system to participate in a survey about STARS. Individuals identified as key stakeholders were a unique group, who were not represented in the provider or mentor survey. Key stakeholders were asked to describe their role or relationship to STARS or the early care and education community (see Figure 3-1). Over one-third of key stakeholders (40%) described their role as providing support or technical assistance to early care and education providers. About one-fifth of key stakeholders (19%) reported they were state administrators. The remaining key stakeholders reported they played a role in STARS implementation (10%), were a licensing specialist (10%), were a policymaker/legislator (3%), or had other roles not listed (18%).

**Figure 3-1. Survey respondent roles in STARS or early care and education community (n=62)**



Source: Child Trends Vermont STARS Key Stakeholder Survey, Spring 2016

## What were key stakeholders' perceptions of STARS?

Key stakeholders were asked about their perceptions of Vermont STARS. Less than half of key stakeholders (49%) agreed that the STARS recognition process was an accurate reflection of program quality. Key stakeholders who agreed with this statement were given a chance to explain, and most recognized that even though the STARS recognition process gave information about program quality, there was still room for improvement (see example comment in the pull-out box).

*"Although I believe that STARS indicates a level of quality, I'm not convinced that there is a proven substantial differential between the star levels."*

Key stakeholders who disagreed with the statement were asked how the STARS recognition process could be improved. Many mentioned that an increase in program accountability through continued monitoring and less reliance on self-report would improve the process. See the pull-out box for an example comment from a key stakeholder.

*"There is no accountability - programs describe what they do, and no one checks to be sure the policies and practices are truly being practiced."*

Key stakeholders largely agreed (96%) they would recommend that programs join Vermont STARS (see Table 3-1). Many key stakeholders believed that programs made changes because of STARS (84%) and

that STARS helped improve program quality (83%). In addition, a large majority of key stakeholders (87%) agreed that STARS was beneficial to families.

The majority of key stakeholders (80%) agreed the quality improvement supports provided to programs were meaningful. Slightly less (70%) agreed the quality improvement supports were adequate.

Over three-quarters of key stakeholders (78%) believed the STARS levels should represent uniform aspects of quality across all programs. A similar amount (74%) believed it was important for programs to have flexibility to be able to choose where they focused their quality improvement efforts within the STARS arenas.

**Table 3-1. Key stakeholders’ level of agreement with various statements about Vermont STARS**

Perceptions of STARS	Agree	Disagree	No comment
I recommend that programs join STARS. (n=46)	96%	2%	2%
I believe that programs have improved because of STARS. (n=46)	83%	13%	4%
Programs have made important changes to their practice as a result of joining STARS. (n=45)	84%	9%	7%
STARS is beneficial to families. (n=46)	87%	9%	4%
The quality improvement supports provided to programs to help them improve their STARS rating are meaningful. (n=46)	80%	13%	7%
The quality improvement supports provided to programs to help them improve their STARS rating are adequate. (n=46)	70%	28%	2%
All programs that receive the same star level should represent the same aspects of quality across the STARS quality arenas. (n=46)	78%	13%	9%
It is important for programs to have the flexibility to be able to choose where they focus their quality improvement efforts within the STARS quality arenas. (n=46)	74%	22%	4%

Source: Child Trends Vermont STARS Key Stakeholder Survey, Spring 2016

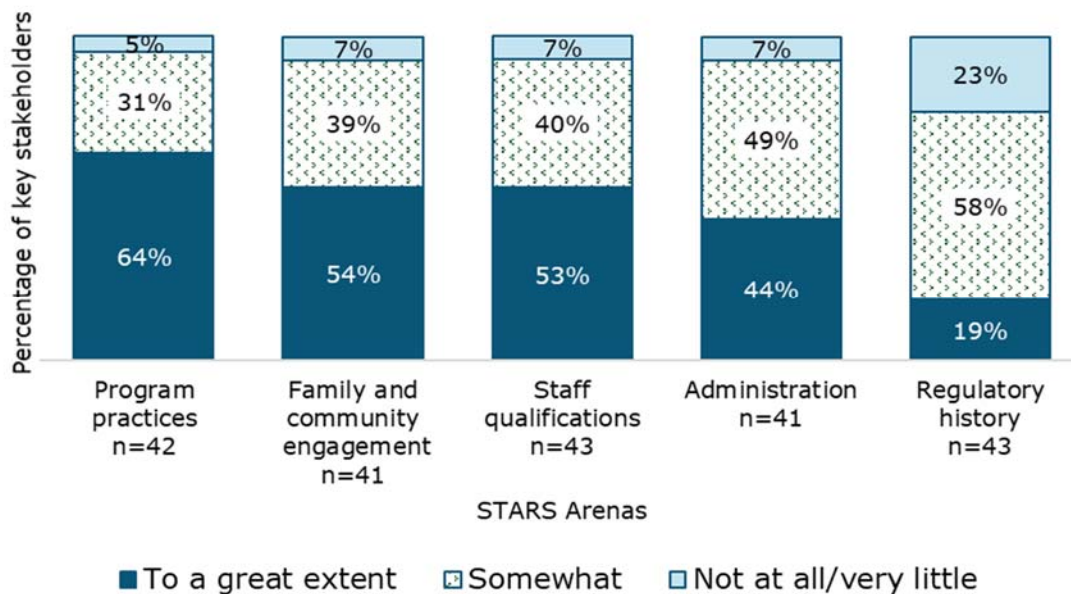
## What were key stakeholders’ perceptions of the STARS arenas?

Key stakeholders were asked questions about their perceptions of the STARS quality arenas. Almost all key stakeholders (93%) were familiar with the STARS quality arenas. Those who were familiar with the arenas were asked if the criteria in each arena captured the most important aspects of high-quality early care and education to a great extent, somewhat, very little, or not at all. Key stakeholders were also given a chance to explain their answer.



Almost two-thirds of key stakeholders (64%) felt the requirements in the Program Practices arena greatly captured the most important aspects of high-quality early care and education (see Figure 3-2). Over half of key stakeholders (54%) felt the requirements in the Families and Community arena greatly captured the most important aspects of high-quality early care and education. Over half of key stakeholders (53%) felt requirements in the Staff Qualifications arena greatly captured the most important aspects of high-quality early care and education. Less than half of key stakeholders (44%) felt requirements in the Administration arena captured the most important aspects of high-quality early care and education.<sup>e</sup> Only some key stakeholders (19%) felt requirements in the Regulatory History arena greatly captured the most important aspects of high-quality early care and education.

**Figure 3-2. Perceived ability of STARS arenas to capture important aspects of quality**



Source: Child Trends Vermont STARS Key Stakeholder Survey, Spring 2016

*"I think this is a particularly important arena [Program Practices] because quality is measured/assessed in some form. This isn't about completing tasks or having an education, this is really about how is what you know and do translated into quality services."*

When asked to explain why they thought the Program Practices arena was valid, key stakeholders mentioned that they liked the structure of the arena (17%) and the focus on tools (17%). Those who believed Program Practices captured high-quality care very little or not at all commented that more emphasis should be placed on teacher and child interactions and that the tools used in this arena were a narrow measure of quality.

Regarding the Families and Community arena, key stakeholders explained that they believed in the importance of family and community engagement (19%); however, almost half of key stakeholders (44%) who commented felt the definition of engagement should be more intentional and/or empirically based. Almost half of key stakeholders' comments about the Families and Community arena (44%) mentioned feeling favorable about the Strengthening Families program.

*"The research related to Families and Community is changing quickly and I would like to see STARS take advantage of this moment in time to update this arena to reflect the current best practice options related to research."*

<sup>e</sup> This survey was administered before the release of the new licensing regulations that went into effect on September 1, 2016. Vermont Agency of Human Services and the Department for Children and Families (2016, September 1). Retrieved from [http://dcf.vermont.gov/sites/dcf/files/CDD/Docs/Licensing/CBCCPP\\_Regulations\\_FINAL.pdf](http://dcf.vermont.gov/sites/dcf/files/CDD/Docs/Licensing/CBCCPP_Regulations_FINAL.pdf)

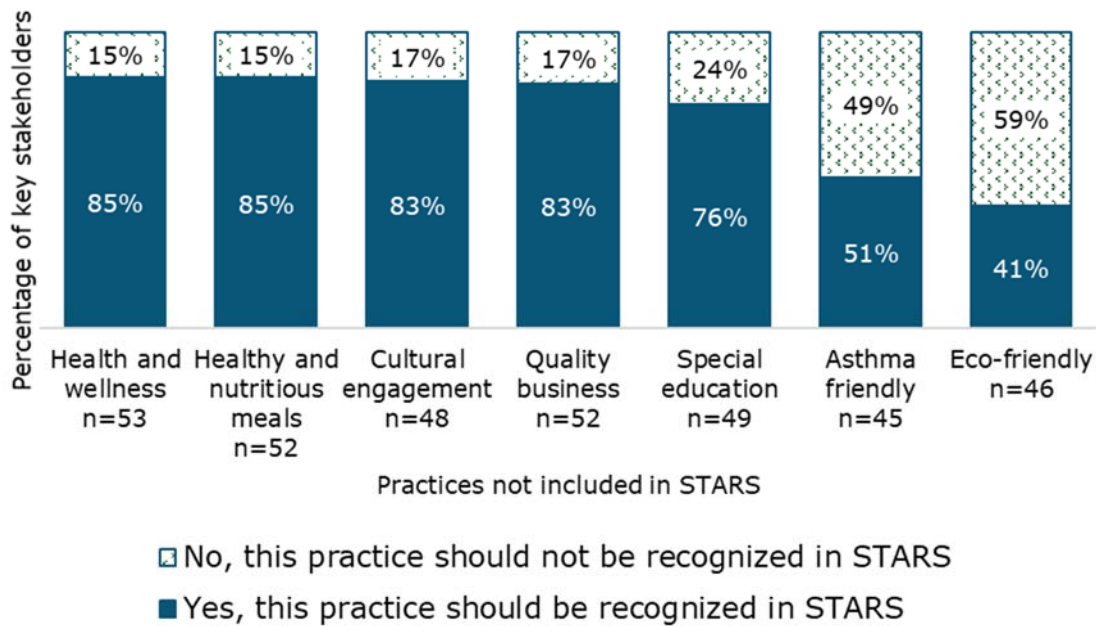


When asked to comment on the Staff Qualifications arena, those who commented pointed out that higher education and more hours of training do not clearly translate to better skills in child care (32%).

Key stakeholders commented on additional requirements that should be added to the Administration arena (36%), such as having written policies and evaluating management practices. A similar amount (36%) also felt requirements needed to be updated to align with current research and/or licensure requirements. When asked to explain their answers about the Regulatory History arena, almost a third (27%) felt this arena is unfair to new programs and often an undue burden. See Table 3-2 for example sentiments from each arena.

Key stakeholders were asked their feelings regarding practices not currently recognized in STARS (see Figure 3-3).

**Figure 3-3. Stakeholder feelings regarding other practices being recognized in STARS**



Source: Child Trends Vermont STARS Key Stakeholder Survey, Spring 2016

*“It is important to recognize that a program has made efforts to provide a healthy environment.”*

Most key stakeholders (85%) believed that health and wellness practices should be recognized in the STARS system. When asked to comment, half of key stakeholders (50%) reiterated the importance of these practices. Those who did not support the addition commented that these practices should already be covered in another category (25%), such as licensing requirements or program practices.

Most key stakeholders (85%) also agreed that healthy and nutritious meals should be recognized in the STARS system. When asked to explain their response, almost one-third of key stakeholders (30%) reiterated the importance of these practices. Those who did not support the addition commented that these practices would be redundant with licensing or food program requirements (18%).

*“Great way to encourage and incentivize programs to provide nutritious foods in their programs.”*

Most key stakeholders (83%) felt that practices surrounding cultural engagement should be recognized in the STARS system. When given a chance to comment, half (50%) reiterated the importance of these

*“It is important for all programs to embrace cultural diversity and meet the needs of all children.”*

practices. Those who did not feel that these practices should be recognized mentioned that they would be difficult criteria to meet for programs in areas without cultural diversity (15%) or that these practices are included elsewhere in STARS (15%). For example, one key stakeholder noted: *“This is well documented in the ECERS.”*

Most key stakeholders (83%) noted that quality business practices should be recognized in the STARS system. When asked to explain, almost half of key stakeholders (44%) confirmed the importance of quality business practices for high-quality care. Some key stakeholders (19%) who did not support the addition mentioned that these practices should be included or are already included elsewhere in STARS.

*“[Vermont] programs and providers need more training and best practice materials to improve our business savvy and models.”*

About half of key stakeholders (51%) felt asthma-friendly practices should be recognized in the STARS system. When asked to comment, one-third of key stakeholders (33%) explained that although important, these practices could be streamlined into another area. A key stakeholder mentioned that these practices should be *“include[d] in [the] health and wellness arena.”*

Less than half of key stakeholders (41%) felt eco-friendly practices should be recognized in the STARS system. When asked to comment, over one-quarter believed that these practices should not be included in the system but could receive extra recognition (27%). One key stakeholder explained that these practices were *“not directly related to quality of care provided.”*

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Chapter 4

# STARS Quality Constructs

Quality Arenas and Indicators

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## Purpose of this chapter

The purpose of this chapter was to review the extent to which Vermont STARS contained quality components and indicators similar to other QRIS.

## Contents

1. Method
2. How did the quality arenas in Vermont STARS compare to the quality components included in the Compendium?
3. How did the quality indicators in Vermont STARS compare to the indicators described in the Compendium?
4. What quality components were included in other QRIS that were not included in STARS?

## Summary of findings

- STARS quality arenas mapped well with other QRIS. The five quality arenas (Regulatory History, Staff Qualifications, Families and Community, Program Practices, and Administration) represented quality components also found in the majority of other QRIS documented in the Compendium.
- Indicators of health and safety, teacher-child interactions, continuous quality improvement, and cultural and linguistic diversity were areas for future consideration. These four areas were represented in other QRIS but were not fully included in STARS current quality arenas or indicators.

## Method

The purpose of the quality arena and indicator crosswalk was to summarize literature related to the quality arenas in STARS and compare practices between STARS and other Quality Rating and Improvement Systems (QRIS). This information may identify new or innovative practices in other QRIS that may help inform Vermont's quality rating efforts.

The BUILD Initiative sponsored the 2014 [\*Catalog and Comparison of Quality Rating and Improvement Systems\*](#)<sup>4</sup> (referred to throughout this chapter as the "Compendium") that profiles 40 QRIS efforts nationwide (including Vermont) to measure, monitor, and promote high-quality child care. State QRIS administrators completed a Compendium survey in which they described aspects of their QRIS, including information on indicators of quality, funding, incentives, technical assistance, observation tools, and others. Profiles of each QRIS and reports of all data elements across QRIS are available in the Compendium. The Compendium data were used to address three primary research questions:

1. How do the quality arenas in Vermont STARS compare to the quality components included in the Compendium?
2. How do the quality indicators in Vermont STARS compare to the indicators described in the Compendium?
3. What quality components/indicators are included in other QRIS that are not included in STARS?

For the purpose of this report, the term "quality component" is used comparably to the Vermont term "quality arena." The term "indicator" is used to describe the specific requirements included in the QRIS within a quality component (or arena) such as "posts lesson plans weekly."

## How did the quality arenas in Vermont STARS compare to the quality components included in the Compendium?

As a first step, STARS quality arenas were grouped according to the relevant quality components included in the Compendium (see Table 4-1). This was done to identify if there were quality components in other QRIS that are not reflected in some way in the Vermont STAR arenas. Table 4-1 illustrates that at the arena level, Vermont STARS covers many of the quality components identified in the QRIS Compendium.

**Table 4-1. Grouping of STARS Arenas and QRIS Compendium quality components**

STARS arenas	Compendium quality components
Regulatory History	Licensing Compliance
Staff Qualifications	Staff Qualifications and Training
Program Practices	Environment Curriculum Child Assessment Accreditation Provision for Special Needs Health and Safety
Families and Community	Family Partnership Community Involvement
Administration	Administration and Management Cultural/Linguistic Diversity Ratio and Group Size Continuous Quality Improvement Interactions

Source: Child Trends analysis of STARS indicators and Compendium Quality Components

## How did the quality indicators in Vermont STARS compare to the indicators described in the Compendium?

After grouping the STARS arenas at the QRIS component level, descriptions of STARS indicators were compared to indicator descriptions provided by the 40 QRIS in the Compendium. This analysis provides a deeper understanding of specific indicators and quality practices that may be included in other state QRIS and may or may not currently be a part of STARS (see Table 4-2 and Table 4-3).

It is worth noting that while the Compendium is the best source of data on QRIS nationally, it does have limitations as a data source. First, states self-reported descriptions of their indicators and quality practices, which may lead to errors or misinterpretations if the survey question was not clear to the respondent. The

level of detail provided by respondents also varied across states. Since the Compendium is a self-reported *summary* of indicators included in QRIS and does not provide the actual indicators, the research team was not able to determine the degree to which another QRIS may be measuring, monitoring, and supporting specified indicators. For example, the QRIS profile may indicate that the respondent reported the QRIS included indicators related to “community involvement.” However, additional details about what and how community indicators were included in the QRIS were often vague and varied from one QRIS profile to another, which prevented more detailed analysis of QRIS practices. The Compendium also does not currently collect data on school-age programs, which are included in Vermont STARS. Finally, the Compendium data used for this report provides a snapshot of QRIS practices from 2014 and may not reflect the changes that occur across QRIS over time. Some states may have made changes to their QRIS that would not be reflected in this analysis.

**Table 4-2. Number of QRIS (n=40) that included indicators for center-based care related to selected quality components (2015)**

STARS Quality Arenas	Quality Components Identified in the QRIS Compendium	Vermont	Total # of QRIS in Compendium Incorporating Indicators <sup>1</sup>
<b>Regulatory History</b>	Licensing and Compliance	✓	33
<b>Staff Qualifications</b>	Staff qualifications and training		
	• Director qualifications	✓	39
	• Director training	✓	35
	• Teacher qualifications	✓	38
<b>Families and Community</b>	• Teacher training	✓	30
	Family partnerships	✓	38
<b>Program Practices</b>	Community involvement	✓	18
	Child assessment	✓	22
	Environment	✓	37
	Interactions		12
	Curriculum	✓	33
	Accreditation	✓	34
	Provisions for children with special needs	✓ (described above)	28
	Continuous quality improvement		23
	Cultural/linguistic diversity		19
	Health and safety		35
	Ratio and group size	✓ (described above)	31
<b>Administration</b>	Administration and management	✓	39

<sup>1</sup> These counts include Vermont, when relevant.

**Table 4-3. Number of QRIS (n=36) that included indicators for family child care homes (FCCHs) related to selected quality components (2015)**

STARS Quality Arenas	Quality Components Identified in the QRIS Compendium	Vermont	Total # of QRIS in Compendium Incorporating Indicators <sup>1</sup>
<b>Regulatory History</b>	Licensing and Compliance	✓	31
<b>Staff Qualifications</b>	Staff qualifications and training	✓	35
	• Provider qualifications	✓	17
	• Provider training	✓	13
	• Asst. provider qualifications	✓	6
<b>Families and Community</b>	Family partnerships	✓	33
	Community involvement	✓	13
<b>Program Practices</b>	Child assessment	✓	17
	Environment	✓	32
	Interactions		18
	Curriculum	✓	25
	Accreditation	✓	29
	Provisions for children with special needs	✓ (described above)	14
	Continuous quality improvement		17
	Cultural/linguistic diversity		15
	Health and safety		30
	Ratio and group size	✓ (described above)	24
<b>Administration</b>	Administration and management	✓	32

<sup>1</sup> These counts include Vermont, when relevant.

## Regulatory History

Child care licensing is an essential regulatory process to ensure that basic health and safety provisions are in place to protect children from harm.<sup>5</sup> Licensing regulations serve as the foundation on which high quality early childhood programs are built, and compliance with licensing regulations demonstrates a program's ability to prioritize adherence to these rules. Research indicates that states with more effective child care regulatory structures and stricter licensing standards have a greater number of quality programs available to children and families.<sup>6</sup>

QRIS that responded to the Compendium survey were asked if licensing is required at the first level or required for enrollment in the QRIS. As of 2014, 32 of 40 QRIS included indicators related to licensing compliance in their QRIS for child care centers (31 for FCCHs). In Vermont, programs must be registered or licensed to be eligible to participate in STARS but are not required to obtain points for regulatory history to attain a STAR rating. As of May 2015, nearly all (97%) of the 587 home-based providers participating in STARS were registered FCCHs. Most of the registered FCCHs were rated one or two stars; however, 33% (177 homes) of the registered FCCHs were rated three, four, or five stars.



## Staff Qualifications

The education and training of individual teachers and caregivers have been consistent predictors of positive outcomes for children in multiple research studies.<sup>7</sup> However, some studies have not detected relationships (or have found contradictory relationships) between educational qualifications—such as college degrees—and classroom quality and children’s outcomes.<sup>8</sup> The field widely acknowledges that most existing studies do not capture important features of pre-service education that may lead to mixed results, such as content of an early childhood degree, participation in field experiences, and capacity of degree-granting institutions.<sup>9</sup> Although the evidence is mixed, some studies suggest that a bachelor’s degree with a focus on core competencies has the potential to offer early care and education providers the tools for establishing high-quality classrooms and promoting positive child outcomes, when other important supportive factors for providers are also in place.<sup>10</sup> In addition to staff qualifications, professional development that is intensive, on-going, and includes targeted coaching can contribute to positive outcomes for children.<sup>11</sup> Structured professional development opportunities that focus on knowledge and practice are often most effective in supporting teacher and caregiver practices.<sup>12</sup> This includes coupling on-site technical assistance with professional development efforts, such as a coach, so that early care and education providers are able to practice and implement what they have learned through trainings or workshops.<sup>13</sup>

QRIS administrators participating in the Compendium survey were asked to describe indicators related to staff qualifications and professional development for center directors, family child care providers, and teachers. Of the 40 QRIS profiled, nearly all reported indicators related to staff qualifications for center directors (n=38), family child care providers (n=35), and teachers (n=37). Training requirements were prevalent in most QRIS for center directors (n=34) and lead teachers (n=29), but less common for family child care home providers (n=17) and assistant family child care providers (n=6). In Vermont, each center-based administrator and teaching staff calculate a composite score that considers their education, professional development, and years of experience to determine an individual score, which is then used to determine a site-wide score for staff qualifications.

## Families and Community

There is evidence that increasing the meaningful participation of families in early care and education settings is linked to greater academic motivation and stronger social-emotional skills among all young children regardless of ethnic or socioeconomic background.<sup>14</sup> Effective partnerships with families are characterized by mutual respect, shared decision making, and bi-directional communication.<sup>15</sup> Building these partnerships means recognizing the resources families can offer to programs, such as knowledge about their child’s individual needs, or a home environment that reinforces learning experiences.<sup>16</sup> It also requires being sensitive to families’ language preferences, educational or financial limitations, and the extended family that may be active participants in a child’s development and learning.<sup>17</sup> Connecting families to community resources that can support their health, family stability, and financial well-being is also a common best practice of Head Start and National Association for the Education of Young Children (NAEYC) accredited programs.<sup>18</sup>

While it was common for a QRIS to include indicators related to family engagement (n=37 for center-based programs; n=33 for FCCHs), it was less common for a QRIS to include indicators related to community involvement (n=17 for center-based programs; n=13 for FCCHs). Vermont includes indicators for both family and community involvement. Further, Vermont includes two “tracks” by which programs can earn three points related to family engagement. One three-point track recognizes programs that use the Strengthening Families self-assessment tools to evaluate program practices and develop a plan of action

based on the findings. Only nine other states use the Strengthening Families<sup>f</sup> checklist as part of their QRIS framework for family engagement.

### Provisions for children with special needs

For a program to earn two points in the Families and Community arena, they must be a Specialized Services provider that can care for vulnerable children and high-risk families. Vulnerable children and families are defined as: (1) children who are engaged in protective services, (2) families experiencing significant stress in areas such as shelter, safety, emotional stability, substance abuse, or children's behaviors, or (3) children who have special physical or developmental needs as defined by a One Plan<sup>g</sup> or an Individualized Education Plan (IEP).<sup>19</sup> In 2015 becoming a Specialized Services provider included completing an initial six-hour training, then participating in six additional hours of training annually. This changed in 2016, and providers now need to have six of the 15 hours required by licensing to be in advanced specialized care topics. Currently, 27 QRIS include indicators related to provisions for children with special needs for centers, and 14 QRIS include similar indicators for home-based providers.

## Program Practices

Indicators in Vermont's Program Practices arena align with four of the quality components identified in the Compendium: curriculum, child assessment, environment, and accreditation. Ratios are not explicitly measured in STARS, but ratio requirements are a part of licensing. Indicators related to provisions for children with special needs are addressed in the STARS Families and Community arena.

### Curriculum and child assessment

A developmentally appropriate curriculum that supports the knowledge, skills, and abilities across all of the domains of early childhood development can help young children achieve goals that are educationally significant.<sup>20</sup> When a developmentally appropriate curriculum is implemented to fidelity and in a way that supports children's conceptual understanding, children are most likely to achieve the intended goals and outcomes of that curriculum approach.<sup>21</sup> Training teachers on the use of specific curricula and providing on-site coaching has been found to increase the likelihood that curricula are implemented to fidelity.<sup>22</sup> The use of ongoing authentic observational assessment practices to plan and guide instruction with young children is widely acknowledged as a key component of a high-quality early care and education program.<sup>23</sup> When curriculum and assessment practices are aligned, developmentally appropriate, and implemented with fidelity, curriculum and assessment practices can work together to support the growth and development of individual children and their needs.<sup>24</sup>

Currently most QRIS include indicators related to curriculum (n=32) and assessment practices (n=21) by requiring the use of a particular curriculum, requiring that programs use a curriculum/assessment from an approved list, demonstrating how the curriculum/assessment in use is aligned with the state early learning guidelines or asking that the curriculum/assessment be reviewed by a state board or committee. STARS does not specify a particular curriculum to be used in programs but does indicate that the Vermont Early Learning Standards are to inform the development of program curriculum. Similarly, STARS does not specify the use of a particular assessment tool but does indicate that observations should be conducted through the use of checklists, anecdotal notes, work samples, etc. Note that Vermont Prequalified Pre-Kindergarten programs are required to use Teaching Strategies GOLD™, an assessment tool that aligns to the STARS requirements, for conducting child assessments.

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<sup>f</sup> The Strengthening Families framework focuses on enhancing positive child development and preventing child maltreatment by building on family strengths using five protective factors based in research. More information on Strengthening Families can be found at <https://cssp.org/our-work/project/strengthening-families/>.

<sup>g</sup> Vermont's One Plan is also known as an Individualized Family Service Plan (IFSP)

## Environment

Children who experience high-quality early care and education environments have better academic and social skills than do children who experience lower quality early care and education.<sup>25</sup> Providing high-quality early care and education begins with intentional, consistent, nurturing relationships that promote young children's positive growth and development. Developing and maintaining high-quality interactions is necessary for supporting young learners in their growth of emotional, cognitive, and social skills.<sup>26</sup>

The quality of learning environments in early care and education is often described in terms of *structural* quality and *process* quality. Structural quality includes features of settings and programs, such as the quality of the physical environment and the materials available, teacher/caregiver education, teacher/caregiver-child ratios, and group size. Process quality tends to focus on the more dynamic aspects of the group setting, including teacher/caregiver-child interactions, the use of materials to engage children, child-to-child interactions, and relationships.<sup>27</sup> While both the structural features and the process features of early care and education settings are important for children's development, research has shown that process quality features—children's immediate experience of positive and stimulating interactions—are the most important contributors to children's gains in language, literacy, mathematics and social skills.<sup>28</sup> It is important to note, however, that structural features of quality (those features that can be changed by structuring the setting differently or putting different requirements for staff in place, like group size, ratio, and teacher qualifications) help to *create* the conditions for positive process quality and are connected to child outcomes through the way they increase or decrease the likelihood of stimulating and supportive interactions.<sup>29</sup>

Nearly all QRIS (n=36) include an observational measure of the quality of the child care environment as part of their system. Most use the Environmental Rating Scales (ERS; n=30), many use the Classroom Assessment Scoring System (CLASS; n=18), and about half (n=19) use both. Vermont primarily uses the ERS tools, though the program practices arena honors scores from CLASS or the Youth Program Quality Assessment (YPQA) tool, if the provider prefers those tools.

## Accreditation

Children who have high-quality early care and education experiences tend to have better outcomes across developmental domains than similar children who do not have such experiences.<sup>30</sup> For decades accrediting organizations such as the National Association for the Education of Young Children (NAEYC), and the National Association for Family Child Care (NAFCC) have established research-based standards as a way to recognize high-quality early childhood programs in areas such as staff qualifications, curriculum, group size, family engagement and business practices.<sup>31</sup> As a result, many QRIS recognize programs and professionals who attain accreditation as a high-quality indicator in early care and education settings.

In most QRIS, achieving accreditation from an approved entity typically aligns with the top level or tier of the QRIS. In STARS, to achieve five points in the Program Practices arena, providers have to be accredited by NAEYC or be a Head Start program in compliance via the Triennial Review. Of the 90 nationally accredited or Head Start programs, 87 have achieved five stars.

## Administration

Program administration (which includes features such as program leadership, compensation and benefits, program planning and evaluation, technology, human resources development, and fiscal management) can influence overall program quality in important ways,<sup>32</sup> particularly as it may influence the recruitment and retention of highly-qualified teachers/caregivers.<sup>33</sup> Research in K-12 education demonstrates that children who attend schools with low levels of teacher turnover demonstrate higher academic performance than children who attend schools with high levels of teacher turnover.<sup>34</sup> Programs can increase their chances of recruiting and retaining qualified staff by providing a professional work environment,<sup>35</sup> providing adequate

compensation and paid planning time<sup>36</sup>, and engaging teachers/caregivers in opportunities for performance evaluation and professional development to continuously improve their practice.<sup>37</sup>

While administrative practices are included in nearly all QRIS (n=39 centers; n=32 home-based providers), there is significant variation in the indicators included in the Administration quality component across states. For example, New York's QRIS contains indicators related to financial accountability and sustainability, policies and procedures, staff compensation and benefits, and an administrative self-assessment. The Administration arena in STARS focuses on developing program policies and procedures, creating individual professional development plans, and providing benefits and wage requirements for staff.

## What quality components were included in other QRIS that were not included in STARS?

Reviewing the QRIS Compendium to understand quality practices in other QRIS that may not currently be part of STARS may help inform future conversations about potential revisions. The following section of the report highlights a few quality components not currently a primary focus of STARS: health and safety, teacher-child interactions; cultural and linguistic diversity, continuous quality improvement, and provisions for children with special needs.

### Health and safety

Health and safety is an area that Vermont addresses in licensing rather than in STARS. Other states also address health and safety in licensing but make further specifications with their QRIS. For example, New York, Oregon, and Utah specify quality indicators around screen time in programs. States such as Ohio have a documentation indicator about health screenings for all children. Currently, 35 states articulate quality indicators for centers and 30 states for home-based providers in the health and safety component.

### Teacher-child interactions

Currently, 37 QRIS include quality indicators related to the environment for centers, and 32 QRIS have environment-related indicators for home-based providers, primarily using the Environment Rating Scales (ERS). The ERS indicators include structural quality indicators, such as a focus on having a daily schedule in the classroom, room arrangement and/or furnishings, and provision of learning activities. Other process quality indicators of the environment—specifically adult-child interactions—are less of a focus in STARS. While adult-child interaction is a construct in ECERS-R, it is not a major emphasis of the tool. Vermont's consideration of the ECERS-3, which contains new indicators on interactions (e.g., supervision of gross motor, individualized teaching and learning, staff-child interactions, and peer interactions), may strengthen the connection to this quality indicator for center-based programs.

### Continuous quality improvement

Continuous quality improvement (CQI) is another area for Vermont to consider. While the Program Practices arena includes an indicator related to completing a program improvement plan based on the findings of an ERS self-assessment tool, without direct follow-up by a mentor, it is difficult to ascertain how this tool or the subsequent plan is informing meaningful program improvement over time. Currently, 22 states include CQI indicators for centers, and 17 states include these indicators for family-based providers. In Arizona, for example, each year programs must submit new program improvement goals that are aligned with observations of the center. Ohio programs submit an annual program improvement plan that incorporates feedback from surveys of parents and community partners as evidence of their progress.

## Cultural and linguistic diversity

Practices to support and promote cultural and linguistic diversity is another area for Vermont to consider. The extent to which QRIS include standards related to cultural and linguistic competence is an issue gaining increasing attention at the national level.<sup>38</sup> Currently, 16 states include indicators related to cultural and linguistic diversity for centers, and 13 states include these indicators for home-based providers. For example, Washington requires that programs provide information about community programs in the family's home language. Minnesota programs can earn points for providing at least six hours of training for all lead teachers on cultural competency. Florida - Miami Dade requires that teachers use the child's home language for multiple purposes in the classroom (i.e., not just for giving directions or managing behavior).

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## Chapter 5

# STARS Rating Structure

## Indicator Analysis

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## Purpose of this chapter

The purpose of this chapter was to examine how STARS programs earn points in each arena and to determine if the distribution of points differed by arena or program type.

## Contents

1. Method
2. Across all programs, how many points did programs earn in each arena?
3. How did the points earned vary by star level?
4. How did the distribution of points vary by arena?
5. How did the distribution of points vary by program type?
6. How did the distribution of points vary by additional program categories?

## Summary of findings

- Programs tended to earn more points in Regulatory History and Administration than the other arenas. Sixty-six percent of all programs earned the maximum three points in Regulatory History, and 52 percent of programs earned all three points in Administration.
- The points earned in the other three arenas were more distributed. Thirty-four percent of programs earned zero points in the Staff Qualifications arena, 36 percent of all programs earned zero points in the Families and Community arena, and 43 percent of all programs earned zero points in the Program Practices arena.
- When examined by star rating, one star and two star programs tended to earn points in two arenas (Regulatory History and Administration) and not the other three (Staff Qualifications, Families and Community, and Program Practices).
- Across four of the five arenas, programs differed in the way they earn points. Generally, Afterschool programs (ASPs) and Center Based Child Care and Preschool Programs (CBCCPPs) earned more points in each arena than Registered and Licensed Family Child Care Homes (FCCHs).
- Licensed FCCHs achieved more points in the Administration, Staff Qualifications, and Families and Community arenas than Registered FCCHs.
- CBCCPPs that received Head Start funding or that were nationally accredited earned almost all the points available in each arena.
- Prequalified Pre-Kindergarten programs tended to earn the maximum available number of points in all arenas except for Program Practices.

## Method

The purpose of analyzing the distribution of points achieved by programs in STARS was to better understand the variation among individual indicators of overall quality, by arena and by program type. Results from this analysis can help inform a discussion about if and how each indicator included in STARS was helping differentiate programs along important dimensions of quality.

The approach to the analyses in this chapter was guided by the following research question:

1. Across all programs, how many points (associated with a set of quality practices that programs demonstrated) did programs earn in each arena?
2. How did the points earned vary by star level?
3. How did the distribution of points vary by arena?
4. How did the distribution of points vary by program type?
5. How did the distribution of points vary by additional program categories?

The findings are organized in the order of these research questions. Graphs demonstrating the distribution of indicators according to each research question are presented throughout the report.

Program data detailing the points earned in each arena were gathered from the STARS database and Bright Futures Information System (BFIS) database in November 2015. Data from the two databases were merged on license certificate number, followed by matching by hand where program ID was missing but other identifiable information (i.e., program name and address) was available. In total, 1,088 programs were matched between the two datasets and used in these analyses. Data were analyzed using descriptive statistics including frequencies and means.

### Across all programs, how many points did programs earn in each arena?

The purpose of this first research question was to understand the overall pattern of how points earned varied by program level and arena and to see if the allocation of points was distributed as expected, (i.e., higher-level programs should achieve more points in more arenas than programs rated at lower levels, and all programs should earn some points in all arenas.) Figure 5-1 shows the distribution of points in each arena and by star level.

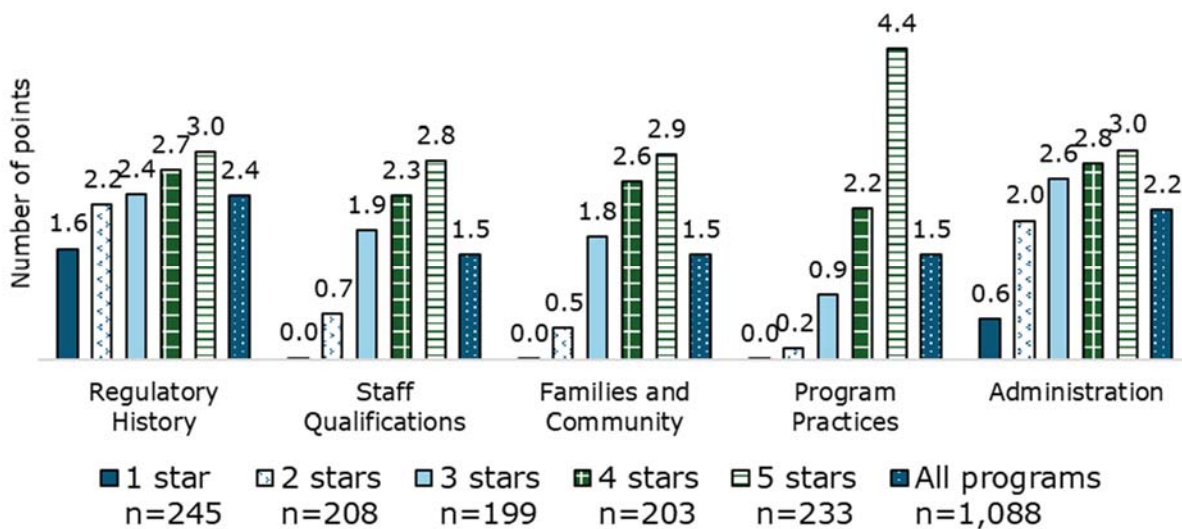
All programs achieved, on average, more points for Regulatory History (2.35 out of three possible points) and Administration (2.15 out of three) than other arenas. The average points earned in the other three arenas was lower for all programs with the lowest average points earned in the Program Practices (1.51 out of five), Staff Qualifications (1.51 out of three), and Families and Community (1.51 out of three) arenas.

### How did the points earned vary by each star level?

Across star level, one and two star programs primarily earned points in Regulatory History and Administration with two star programs beginning to earn points in the other arenas. Three, four, and five star programs earned a large portion of points in Regulatory History and Administration and increasingly earned points in the other three arenas.



**Figure 5-1. Points earned in each arena by star level across all programs**



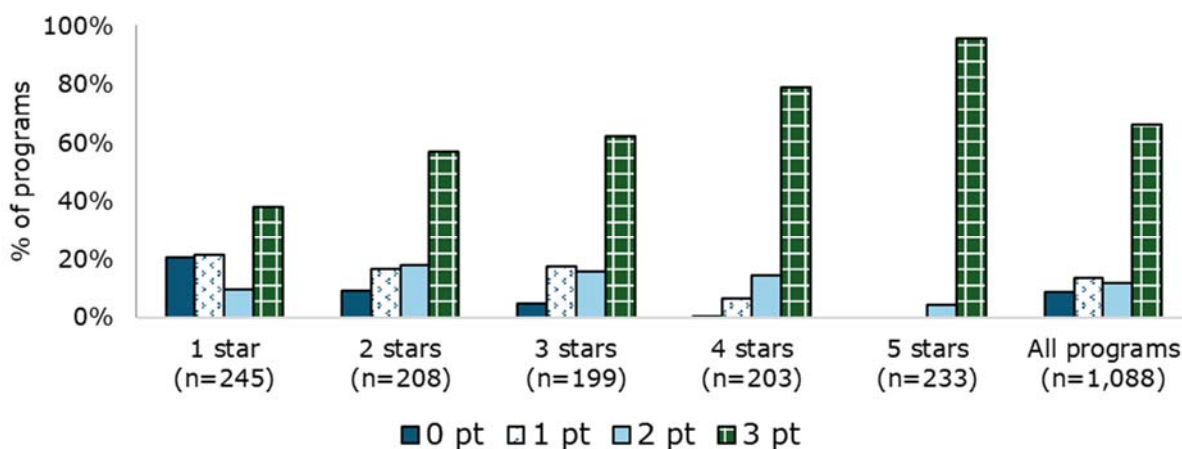
Source: Child Trends analysis of STARS and BFIS databases

## How did the distribution of points vary by arena?

The purpose of the second research question was to examine each arena to better understand variations in the pattern of how points were earned within and across dimensions of quality. For example, this analysis could help identify arenas in which most programs tended to achieve all possible points, or if there were some arenas in which most programs tended to achieve the minimum number of points. In this section, bar graphs for each quality arena show the percentage of programs at each star level that earned the available points. Each figure also includes data for “all programs” (which combines across star levels) on the right side of each figure. Findings for all programs are highlighted in the description for each arena.

Figure 5-2 shows that overall, 66 percent of all programs earned the maximum number of points possible in the in Regulatory History arena.

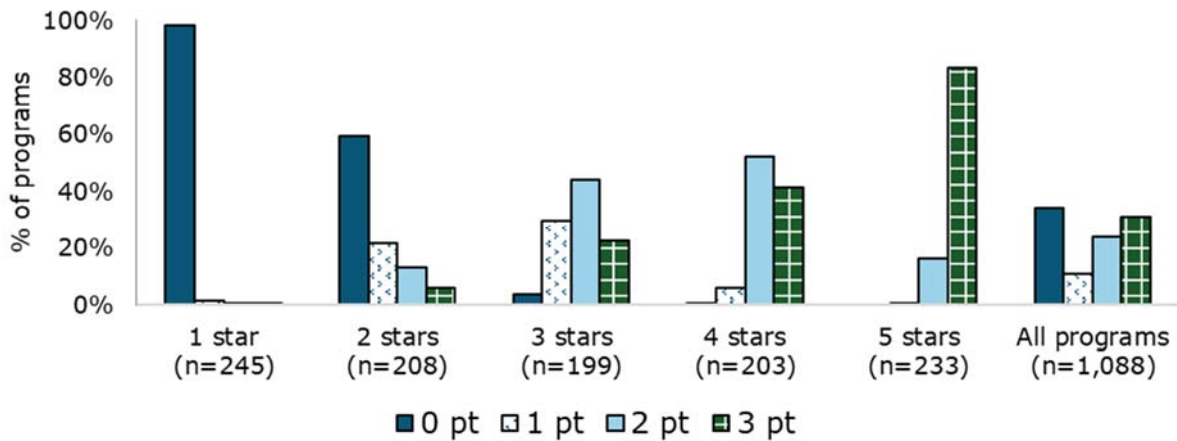
**Figure 5-2. Distribution of points earned in the Regulatory History arena by star level**



Source: Child Trends analysis of STARS and BFIS databases

Figure 5-3 shows that about one-third of all programs (31%) earned the maximum number of points (three points) possible in the Staff Qualifications arena, 24 percent of programs earned two points, 11 percent of programs earned one point, and 34 percent of programs earned zero points. Nearly all one star programs (98%) earned zero points in this arena, while nearly 83 percent of five star programs are earned all three possible points.

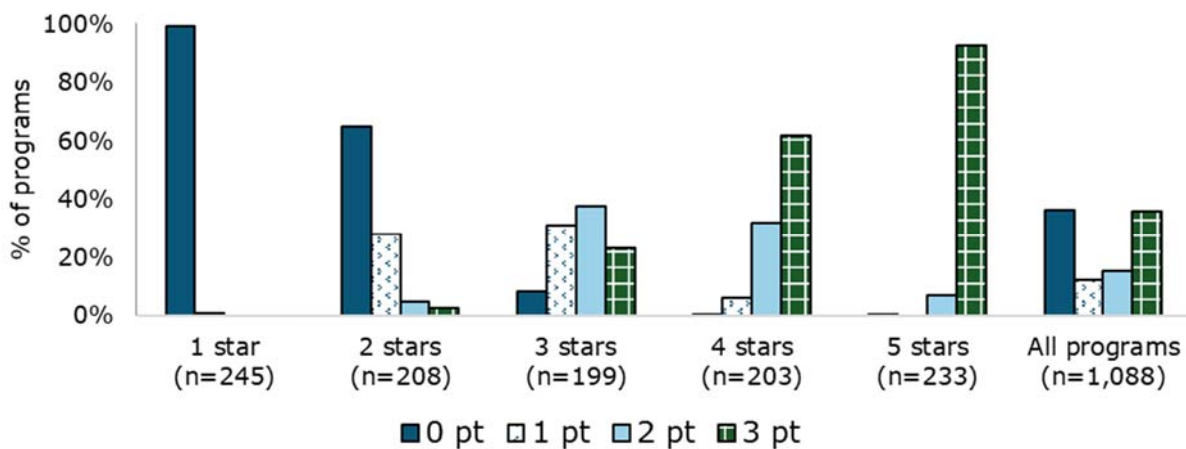
**Figure 5-3. Distribution of points earned in the Staff Qualifications arena by star level**



Source: Child Trends analysis of STARS and BFIS databases

Figure 5-4 shows that in the Families and Community arena, 36 percent of all programs earned three points, and 36 percent of all programs earned zero points. Nearly all one star programs (99%) earned zero points in this arena while 93 percent of five star programs earned the maximum three points.

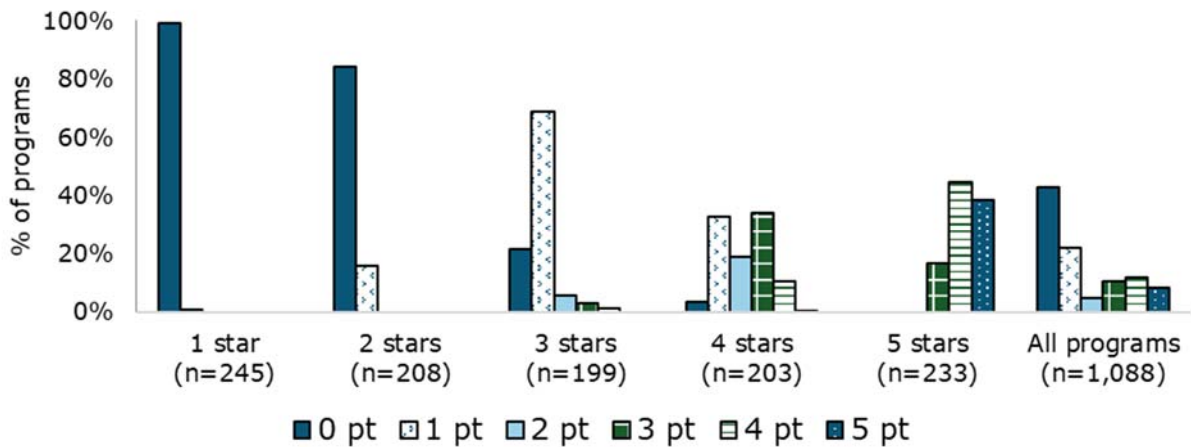
**Figure 5-4. Distribution of points earned in the Families and Community arena by star level**



Source: Child Trends analysis of STARS and BFIS databases.

Figure 5-5 shows that 65 percent of all programs earned zero points or one point in the Program Practices arena, and 35 percent of programs earned two, three, four, or five points.

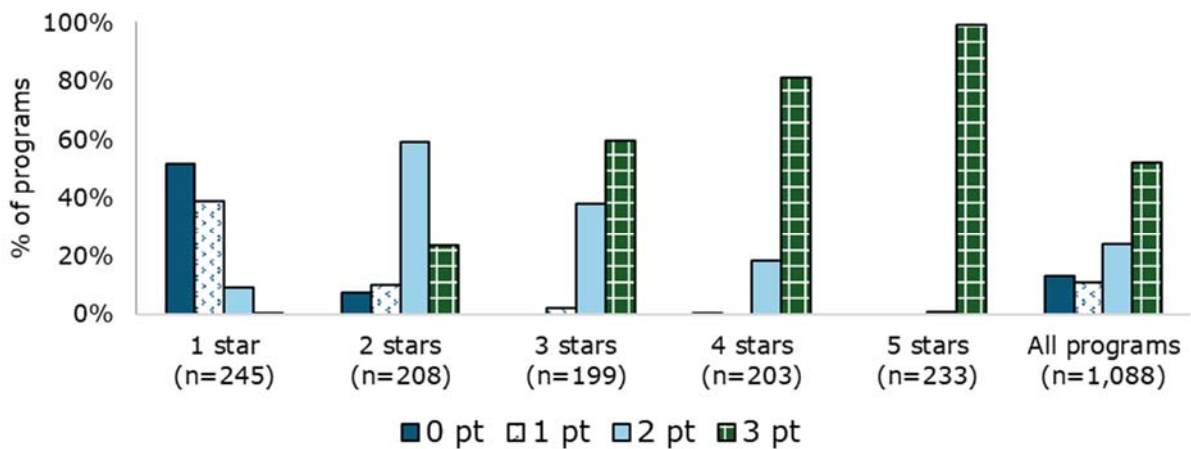
**Figure 5-5. Distribution of points earned in the Program Practices arena by star level**



Source: Child Trends analysis of STARS and BFIS databases

About three-quarters of all programs (76%) earned two or three points in the Administration arena. Over half of one star programs (52%) earned zero points (see Figure 5-6).

**Figure 5-6. Distribution of points earned in the Administration arena by star level**



Source: Child Trends analysis of STARS and BFIS databases

## How did the distribution of points vary by program type?

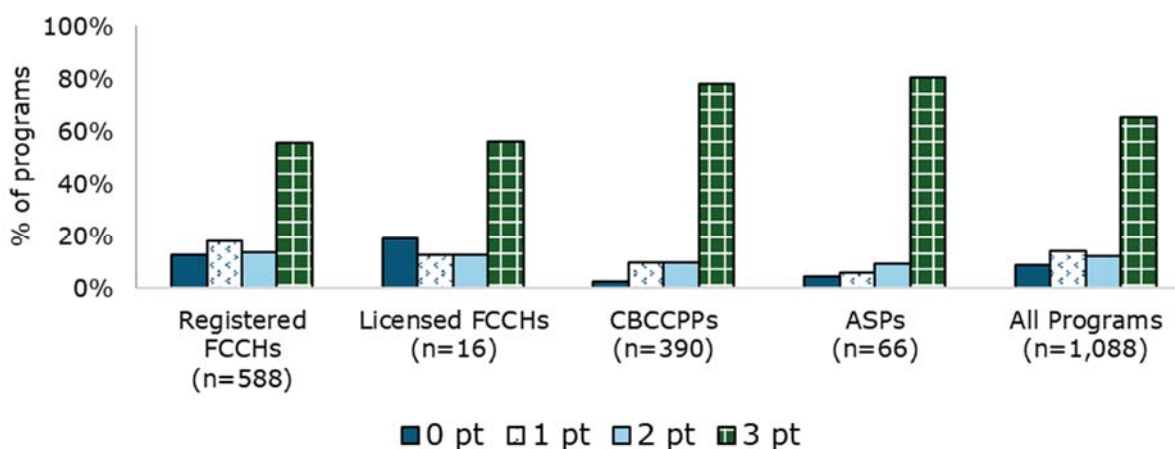
The third research question focused on how different types of programs earned points in each arena. We used four distinctions for program type:<sup>h</sup>

- **Registered Family Child Care Home (Registered FCCH):** Registered FCCHs are family child care homes where the provider typically cares for no more than six children at any time, in addition to up to four school-age children.
- **Licensed Family Child Care Home (Licensed FCCH):** A licensed FCCH may provide care for up to 12 children in the residence of the licensee.
- **Center Based Child Care and Preschool Programs (CBCCPP):** CBCCPPs provide care in community-based or school-based settings for children ages six weeks to 13 years. CBCCPPs also include Head Start programs and publicly and privately operated preschool programs.
- **Afterschool Child Care Program (ASP):** ASPs provide care in community-based or school-based settings for children in Kindergarten or older.

The purpose of this research question was to understand if there were variations in the points programs earned in each arena by program type. Figure 5-7 through Figure 5-11 show the distribution of points by program type.

Figure 5-7 shows that two-thirds of all program types (66%) earned the maximum three points in Regulatory History. Registered FCCHs and Licensed FCCHs were less likely to have three points in this arena (56% each).

**Figure 5-7. Distribution of points earned in the Regulatory History arena by program type**

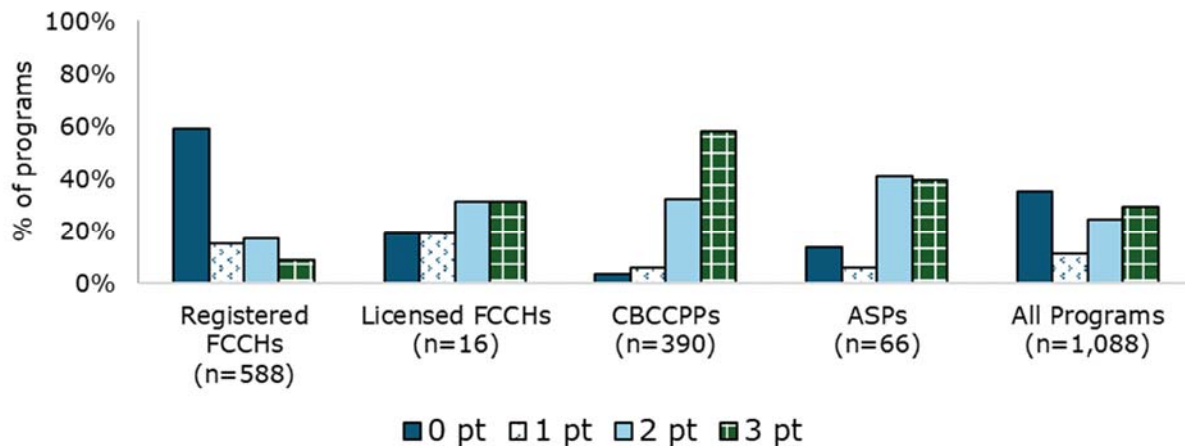


Source: Child Trends analysis of STARS and BFIS databases

<sup>h</sup> There are also non-recurring CBCCPPs that provide child care designed to meet the short term, temporary child care needs of parents, but at the time of this analysis none were participating in STARS.

Figure 5-8 shows that the points in the Staff Qualifications arena were earned differently based on the program type. For example, CBCCPPs (58%) were the most likely to earn three points in this arena. ASPs were most likely to earn two points (41%). Registered FCCHs tended to have earned zero points (59%), while only 19 percent of Licensed FCCHs earned zero points in this arena.

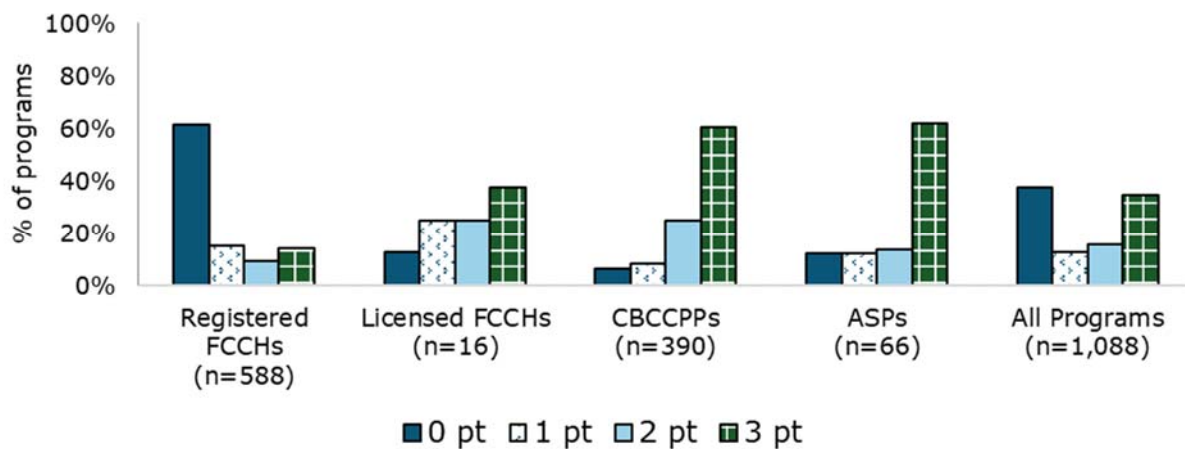
**Figure 5-8. Distribution of points earned in the Staff Qualifications arena by program type**



Source: Child Trends analysis of STARS and BFIS databases

ASPs (62%) and CBCCPPs (60%) were the most likely to earn three points in the Families and Community arena (see Figure 5-9). There were differences in the way the two types of home-based programs earned points (see Figure 5-8). Few (14%) Registered FCCHs earned three points, while 38 percent of Licensed FCCHs earned three points.

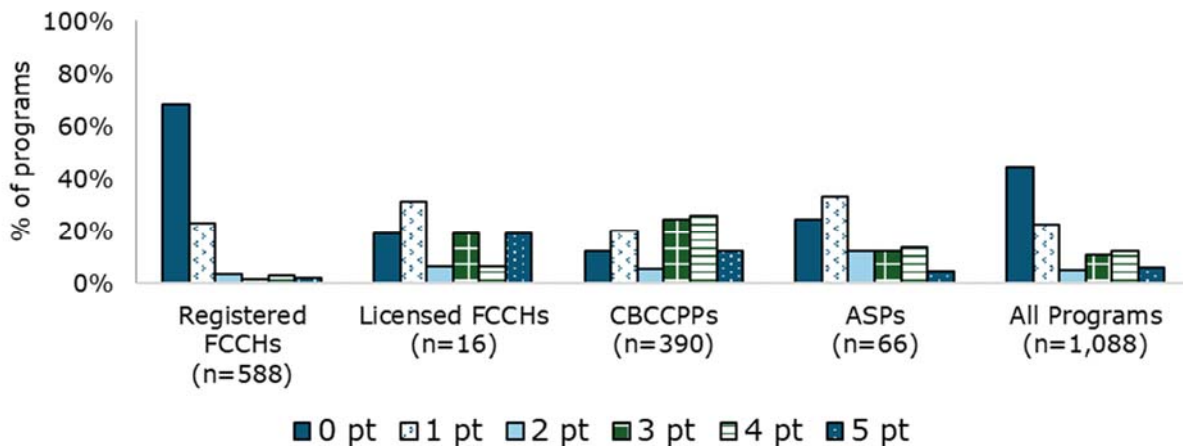
**Figure 5-9. Distribution of points earned in the Families and Community arena by program type**



Source: Child Trends analysis of STARS and BFIS databases

Licensed FCCHs tended to earn similar percentages of points in the Program Practices arena as CBCCPPs when achieving one point (31%, 20%) and two points (6%, 5%) (see Figure 5-10). This means that these programs have begun the ERS self-assessment process but have not had an officially-rated outside observer.

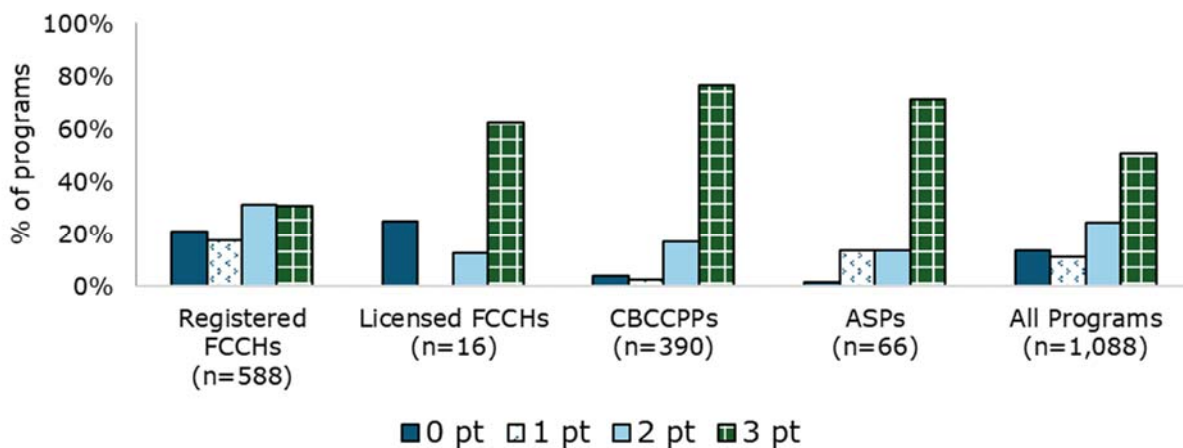
**Figure 5-10. Distribution of points earned in the Program Practices arena by program type**



Source: Child Trends analysis of STARS and BFIS databases

Figure 5-11 shows the distribution of points by program type for the Administration arena. For all program types (except Registered FCCHs), the majority or programs earned all three points.

**Figure 5-11. Distribution of points earned in the Administration arena by program type**



Source: Child Trends analysis of STARS and BFIS databases



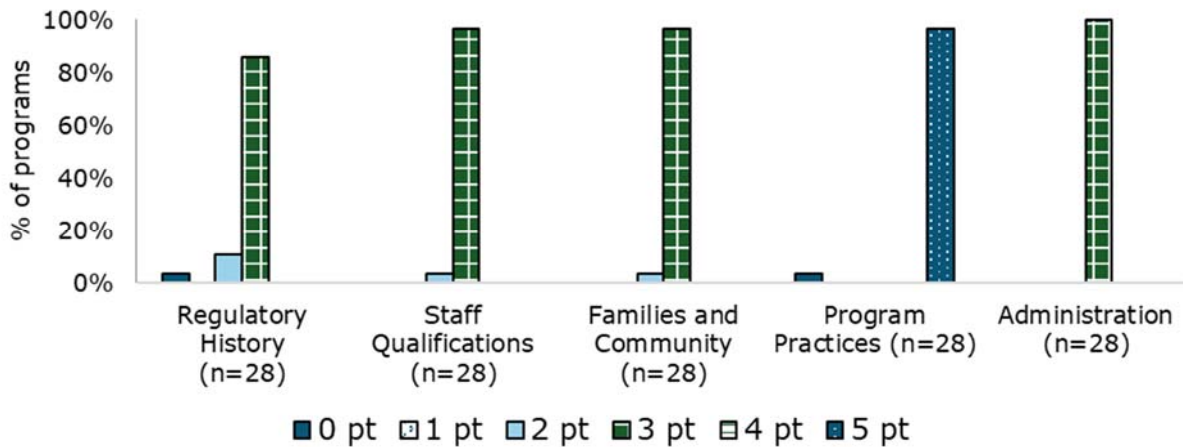
## How did the distribution of points in each arena vary for additional categories of programs?

In addition to the four program types, three other program categories where programs met additional requirements were analyzed. First, Head Start programs (n=28) were separated from other CBCCPPs. Head Start programs with a positive federal monitoring review report may apply for a streamlined STARS application. Second, CBCPPs with a national accreditation (n=90) were also eligible for a streamlined application process. Third, Prequalified Pre-Kindergarten programs (from any licensed program type) were analyzed separately for this report. Definitions of these programs were as follows:

- **Head Start:** Head Start is a federal program that provides comprehensive early childhood services to low-income children and their families. CBCCPPs that were labeled as receiving a Head Start grant in the administrative data were included in the analysis.
- **Accredited:** Any CBCCPP that has received NAEYC, NAFCC, or other recognized accreditation was analyzed.
- **Prequalified Pre-Kindergarten:** Any regulated program may apply to become a Prequalified Pre-Kindergarten provider, according to Vermont’s Act 166 guidelines. For this analysis, any program that was designated as Prequalified Pre-Kindergarten in the administrative data was analyzed.

As seen in Figure 5-12, nearly all Head Start programs earned the maximum points available in each arena.

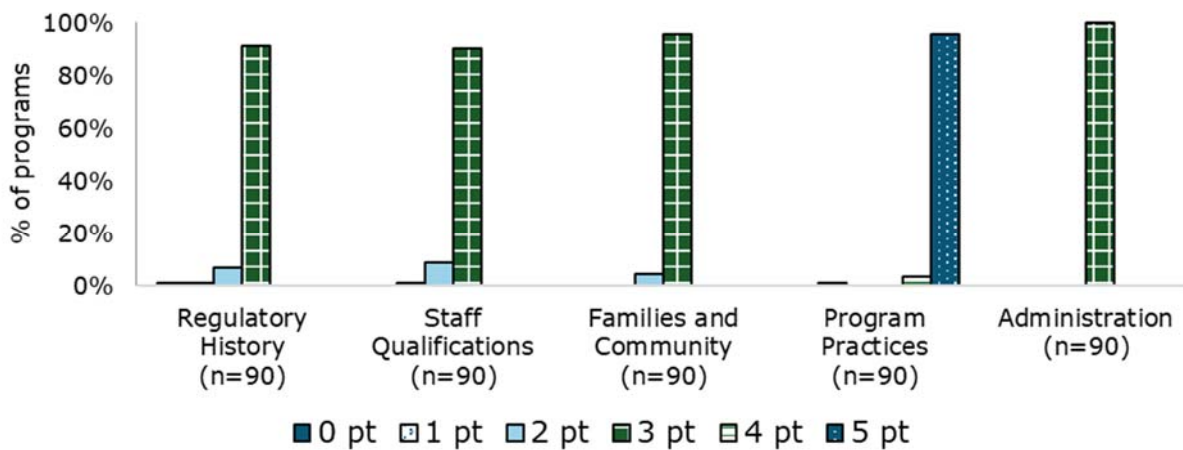
**Figure 5-12. Distribution of points earned in each arena by Head Start CBCCPPs**



Source: Child Trends analysis of STARS and BFIS databases

As seen in Figure 5-13, nearly all accredited CBCCPs earned the maximum points available in each arena.

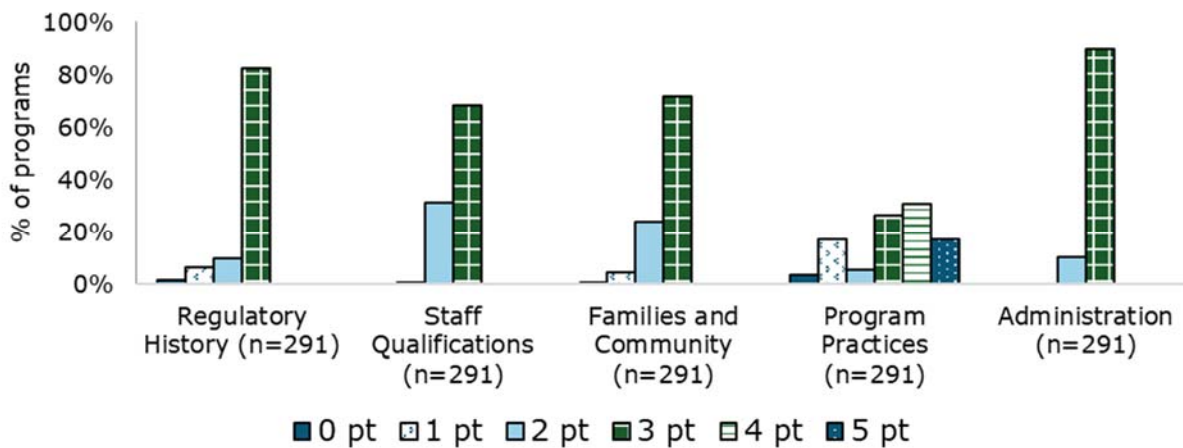
**Figure 5-13. Distribution of points earned in each arena by accredited CBCCPs**



Source: Child Trends analysis of STARS and BFIS databases

As seen in Figure 5-14, 90 percent of Prequalified Pre-Kindergarten programs, which have to earn at least a three star rating, earned the maximum three points in the Administration arena, and 82 percent earned the maximum three points in the Regulatory History arena. Almost three-quarters (71%) earned three points in Families and Community, and 68 percent earned three points in Staff Qualifications. There was a wider distribution of points earned by Prequalified Pre-Kindergarten programs in the Program Practices arena, with 17 percent earning the maximum five points and 31 percent earning four points.

**Figure 5-14. Distribution of points earned in each arena by Prequalified Pre-Kindergarten programs**



Source: Child Trends analysis of STARS and BFIS databases



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Chapter 6

# STARS Rating Process

*Analysis of Measurement Strategies*

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## Purpose of this chapter

The purpose of this chapter was to assess the alignment between recommended best practices and the STARS rating process. The STARS rating process was examined in this chapter from the perspectives of the STARS program verifiers, STARS programs, and the STARS assessors (who observe programs using the ERS tools).

## Contents

1. Method
2. To what extent was the STARS application clear and descriptive of the steps involved in the rating process?
3. To what extent did the program verifiers use a rating review process that was clearly articulated and consistent across verifiers?
4. To what extent did the training and inter-rater reliability procedures used by STARS assessors align with recommended best practices?

## Summary of findings

- **STARS application:** Some indicators in the STARS application required direct evidence of the program's efforts, whereas others relied on self-reported information. Some of the quality arenas, particularly the Families and Community and Program Practices arenas, relied predominantly on self-reported information. To strengthen these requirements, Vermont could develop rubrics to assess the content of written summaries or self-reported documentation. Vermont could also revise submission requirements, to the extent possible, to require more direct documentation.
- **Rating review process:** To date, the process for reviewing STARS applications was developed by the program verifiers and guided by a scoring worksheet. When questions arose, the verifiers conferred with one another or the STARS leadership in the CDD. Moving forward, Vermont should develop an internal manual for program verifiers that articulates the rating review process, training on this process for new program verifiers, and an inter-rater reliability procedure that includes a double-check review on a portion of the scoring worksheets and program documentation.
- **STARS assessors:** The Vermont protocol for training and ensuring the inter-rater reliability of the STARS assessors aligns with the developers' recommended best practices for the ERS tools. Since both STARS assessors at the time this data were collected had maintained 85 percent reliability on the ECERS-R tool, they were both effectively functioning as state anchors. In the future, Vermont should consider designating one individual as the state anchor, especially if the state is considering incorporating new tools such as the ECERS-3 into the rating system. In addition, Vermont should consider reinforcing the STARS assessors training with training on the ITERS-R and FCCERS-R tools provided by the tools' developers.

## Method

One approach to validating a Quality Rating and Improvement System (QRIS) is to examine the psychometric soundness of the strategies used to determine program quality.<sup>39</sup> For example, are there policies and procedures in place to guide the review of ratings applications so that they can be completed reliably by independent reviewers? Similarly, are there policies and procedures in place to ensure that the observed quality measures (i.e., ERS or CLASS) are conducted reliably? The Vermont STARS evaluation examined features of the STARS rating process from three perspectives: the application, the program rating review process, and the assessor training and inter-rater reliability to address the following research questions:

1. To what extent was the STARS application clear and descriptive of the steps involved in the rating process?
2. To what extent did the program verifiers use a rating review process that was clearly articulated and consistent across verifiers?
3. To what extent did the training and inter-rater reliability procedures used by STARS assessors align with recommended best practices?

The purpose of this activity was to assess the alignment between recommended best practices and the STARS rating process. To address the first question, the research team reviewed the STARS application to assess how clearly and effectively it communicates the rating process to program applicants. The second research question was addressed by examining the clarity and consistency of the rating process from the perspective of the individuals tasked with reviewing the STARS applications and determining the award of points (referred to as the “program verifiers”). The final research question was addressed by reviewing the training and inter-rater reliability procedures used by the individuals who conduct the ERS observations (referred to as the STARS assessors).

## STARS application

The Child Trends research team examined the extent to which the guidance in the STARS application given to programs matched the guidance program verifiers used to score STARS applications. Areas in which the application was not clear were noted.

## STARS rating review process

To understand the STARS rating process, Child Trends requested all documents and policy manuals that outlined the procedures program verifiers use when reviewing and scoring a STARS rating application. The STARS office sent the STARS application and a scoring worksheet. The Child Trends team reviewed the STARS application, noting aspects of the application that were clear and easy to understand. The research team also noted any STARS criteria that may be subjective and would require a rubric to score, or any criteria that appeared to be based on self-report data and therefore potentially difficult to verify. The STARS application and the scoring worksheet were reviewed before the Child Trends team interviewed the two program verifiers to further discuss the rating process. Topics covered in the group interview included: the training and ongoing support the program verifiers received on the rating process, the process they engaged in to rate the STARS criteria, processes used to address unique situations and maintain inter-rater reliability, and the process for entering program ratings in the Bright Futures Information System (BFIS) database. The group interview was conducted in March 2016. The conversation was recorded, and notes were synthesized to document the rating process from the program verifiers’ perspective.

The Child Trends team also spent a day with the program verifiers in June 2016 to better understand the rating process. The purpose of this visit was to review hard copies of STARS program applications and talk

with the program verifiers about the process of manually scoring the applications and entering the information into the BFIS database.

*During the time of data collection to address this research question (spring and summer 2016), two staff in the STARS office were responsible for reviewing rating applications (“program verifiers”). Since that time, one of the program verifiers has left and as of fall 2017 (during the time this final report was being developed) that position was filled by a new team member.*

## STARS assessors

In June 2016, the Child Trends team met with the two individuals responsible for conducting the ERS observations for STARS (called “STARS assessors”). The purpose of this group interview was to better understand their background, training, caseloads, the ongoing support they receive as ERS assessors, their scoring procedures, and the process for maintaining inter-rater reliability. This interview was recorded, and notes were synthesized and reported in the following findings section.

### To what extent was the STARS application clear and descriptive of the steps involved in the rating process?

To receive a rating, STARS programs are required to submit an application that reflects their program’s current practices. There are three STARS applications, one for each of the following types of programs: afterschool programs (ASPs), Center Based Child Care and Preschool programs (CBCCPPs), and family child care home programs (FCCHs). Generally, the STARS applications contain: (1) an application cover page, where the program indicates the STARS rating level and the points requested by quality arena, and (2) background and statistical information pages where the program reports information about enrollment and programmatic features. The application also provides guidance related to the criteria within each quality arena, the evidence needed to meet each criterion, and the documentation that programs are to submit along with their application.

Programs are asked to submit an application to receive a STARS rating. Once the application is reviewed, the program receives a three-year certificate. Each year an annual report form is required to maintain their STAR rating. Programs can also choose to apply for additional points on an annual basis as needed.

When a program is ready for a rating, they call the STARS office to request help to address any questions they have about the application process. Once they submit the STARS application and supporting documentation, the ratings review process can take a week to a month before the program rating level is awarded, is entered into the BFIS, and the program is notified of its rating level.

If a program applies for a level that requires an ERS observation (i.e., four or five star) the STARS application may be reviewed while the ERS observation is scheduled. When the rating process is complete, the STARS office sends the program, and the program’s mentor, an email with the program’s rating level.

Programs may appeal a decision made by STARS verifiers using an appeals process document in official STARS rules.<sup>40</sup> To appeal a rating decision, programs must submit a written grievance within 30 days. The grievance is considered by a committee appointed by the Department of Children and Families which can uphold the initial decision or overrule it in favor of the appealing program. While this appeal process is available to programs, it is not used frequently.

During the key informant interview conducted in the spring 2016, the program verifiers indicated that about half of the STARS ratings applications require some form of ongoing communication with the provider. For example, the program verifiers often need to talk with programs because their application has errors, the provider needs some clarification, or some aspect of the application is incomplete. The verifiers noted that the confusion is typically related to the Staff Qualifications arena. The rating process may be stalled for several reasons, for example, if all staff do not have their credentials or training

information entered or current in BFIS, if the verifiers have to obtain resumes or transcripts, or if there is a delay in obtaining the classroom verification form from the approved assessor who worked with the program to complete an observational self-assessment.

To be awarded points, programs must submit documentation as evidence that they have demonstrated the activity described by each indicator. For some of the indicators, there is a direct correlation between the activity described in the indicator and the source of evidence. For example, to earn points in the Regulatory History arena, the program verifier confirmed that “the program has been in operation for the required number of months, that no serious violations have occurred in this time period, and that there is not a pattern of non-compliance.”<sup>41</sup> Or similarly, in the Program Practices arena, to satisfy the ERS self-assessment indicator for one point “the program submits the ‘profile’ page from the assessment tool(s) dated within six months of this application.”<sup>42</sup>

Programs can receive points based on self-reported documentation for some indicators in the STARS application, for example, in the Families and Community arena, “a written leadership philosophy that includes a description of leadership activities and how they are aligned with the leadership philosophy.”<sup>43</sup> Or, in the Program Practices arena, “a description of how the program observes children and keeps records to support the observation process.”<sup>44</sup> The content of the documentation submitted to satisfy these criteria are not evaluated, rather the program verifiers award points for the presence or absence of documentation that address these criteria.

## To what extent did the program verifiers use a rating review process that was clearly articulated and consistent across verifiers?

As of spring 2016 two program verifiers in the STARS office had been conducting STARS application reviews for approximately seven years. In addition to scoring STARS applications and assigning ratings, the program verifiers were responsible for reviewing and approving quality maintenance payments, conducting STARS workshops and trainings, overseeing the reliability trainings for program assessors (i.e., ERS, CLASS, YPQA), and overall outreach and communications with STARS programs.

The program verifiers did not receive formal training on the rating review process but rather developed the process in partnership with the STARS leadership team at the Child Development Division (CDD). There is no manual that outlines guidance for scoring a program’s application or rubrics to evaluate the quality or content of the documentation submitted. Rather, guidance on how to score an application is included in the application score sheet. If a program verifier encounters questions or concerns as they review an application, they either conferred with each other on a process to address the issue or asked the CDD STARS team to provide guidance. The program verifiers did not have a process in place to double-code STARS applications to check inter-rater reliability on a periodic basis.

In addition to sharing how the STARS rating process was conducted, the program verifiers were also asked to share their perspectives on the strengths and weaknesses of the process. They indicated that one strength of the STARS rating process was that all the information needed to obtain each point is included in the STARS application. The program verifiers felt this guidance was straightforward and efficiently communicated. They also indicated, however, that they observed a fair degree of variance in the content and quality of the documentation that is submitted for review, specifically for the criteria that were self-reported. For example, when programs were asked to share a program policy, handbook, or individual professional development plan, they noted variation in the content and the quality or level of detail provided.

They also noted areas of the STARS criteria that may not be achieving the intended purpose of the quality construct. For example, some of the STARS criteria required that a policy, practice, or procedure is in place but does not measure the extent to which that practice is being implemented in the program. Program

verifiers perceived that programs tended to put minimal effort into developing specified handbooks, policies, or procedures. In addition, they noted that criteria in the Families and Community arena was largely based on self-reported practices, which may be biased by the provider's perspective.

## To what extent did the training and inter-rater reliability procedures used by STARS assessors align with recommended best practices?

The extent to which the STARS assessors received sufficient training on the observational quality measures and follow recommended best practices related to inter-rater reliability is an important component of examining the psychometric soundness of the STARS rating process.

To receive four or five points in the Program Practices arena, centers and homes participating in STARS must receive an overall score of five on the appropriate ERS (see the Introduction for a brief overview of the ERS). Because a STARS assessor observed the classroom to complete the ERS scales, it is critical for the assessors to be trained to use the measures appropriately and to maintain their ability to use the measure reliability (such that two assessors would score the ERS similarly if visiting the same classroom at the same time).

At the time of this data collection, Vermont had two STARS assessors who conducted ERS evaluations for all programs aiming for four or five points in the Program Practices arena. The Vermont protocol for training STARS assessors follows the ERS developers' recommended practice (Cryer, n.d.). The STARS assessors attend an in-person training at the Frank Porter Graham Child Development Institute in Chapel Hill, North Carolina where the ERS were developed. To become a certified and reliable assessor, STARS assessors are required to conduct the ECERS-R three times and meet a training standard of 85 percent agreement within one point of a master assessor for each observation. STARS assessors have been trained in North Carolina on the ECERS-R but not on the ITERS-R or the FCCERS-R. As part of the STARS evaluation and validation study, one STARS assessors completed training on the ECERS-3. The other STARS assessor completed a training on the FCCERS-R. The ERS developers suggest that there is at least one ERS anchor in the state. This person is responsible for contacting the ERS developers when clarification on interpretation is needed, communicating these clarifications to other assessors, and completing reliability checks on observers throughout the state (Cryer, n.d.). At the time of this data collection, Vermont had not designated one of their STARS assessors as the state anchor.

The Vermont protocol for maintaining ERS inter-rater reliability aligns with best practice as suggested by the ERS authors (Cryer, n.d.). Every three months, the STARS assessors conduct a simultaneous visit together using the ECERS-R. The ERS developers recommend that the anchor conduct one inter-rater reliability check every ten visits until the observer being checked has reliability scores of 90 percent or higher. Once an observer achieves reliability of 90 percent, reliability checks can happen "less frequently" whereas those who fall below the 85 percent level require more frequent checks until their score is 85 percent or higher (Cryer, n.d.). In STARS, inter-rater reliability checks are completed after every seventh visit to a CBCCPP or FCCH, or every six months, whichever comes first. During these checks the STARS assessors visit a site together, independently score the ERS documentation, and then compare results. If their scores are not consistent 85 percent of the time, they discuss the discrepancies and conduct another reliability check. The STARS assessors indicated they have consistently met the 85 percent reliability threshold. When they have questions about the ERS tools, they contact the North Carolina training team or meet with their supervisors in the STARS office.

The Vermont protocol for conducting ERS assessments in CBCCPPs and FCCHs was consistent with best practice as suggested by the developers (Cryer, Harms, & Riley, 2003). Visits were scheduled several days in advance. In CBCCPPs, all classrooms are observed. In some cases, for example, a child care center open only on select days, the program is notified about the selected classrooms in advance. Though the

developers do not provide guidance on how the ERS scores should be shared with the child care setting, the Vermont protocol aims to provide immediate feedback to providers. The STARS assessors send the observation reports to the STARS office within a week of the observation. Each program receives the verification form (which documents the program's scores on the observational tool) and a summary report of the results by indicator. Each classroom also receives a summary report.

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Chapter 7

# Observed Quality in STARS Programs

Environment Rating Scale Observations

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## Purpose of this chapter

The purpose of this chapter was to examine the extent to which the Vermont STARS rating structure, quality standards, and measurement strategies resulted in accurate and meaningful ratings of program quality.

## Contents

1. Method
2. To what extent did four to five star programs have higher observed program quality than one to three star programs as measured by the ECERS-R, ITERS-R, and FCCERS-R?
3. Were the quality components across the five STARS arenas associated with observed quality?
4. What were the program characteristics associated with higher-levels of observed quality?

## Summary of findings

- Star level was not consistently associated with observed quality. Infant-toddler classrooms in CBCCPPs and registered FCCHs with higher star ratings had significantly higher overall scores on the ITERS-R and FCCERS-R than lower rated programs. However, there were no significant differences between the overall scores of higher-level and lower-level preschool classrooms in CBCCPPs on the ECERS-R.
- Points in STARS quality arenas were not consistently associated with higher quality scores. CBCCPPs and registered FCCHs with three points in Program Practices had the highest overall average ITERS-R and FCCERS-R scores; however, there was no association between the ECERS-R and points scored by CBCCPPs in the quality arenas.
- Program characteristics were not associated with higher-levels of observed quality. Analysis of overall ERS scores with program characteristics such as Pre-Kindergarten prequalification, participation in the Strengthening Families grant program, and serving infants and toddlers found that these program characteristics were not significantly associated with higher ERS scores.

## Method

One component of validity is to examine the extent to which the STARS levels reflect meaningful differences in quality. To address this question, Child Trends conducted observations using the Environment Rating Scales (ERS), a valid and reliable suite of tools widely used in early care and education settings to measure classroom and program quality.<sup>45</sup> Vermont STARS uses the Early Childhood Environment Rating Scale – Revised (ECERS-R) to evaluate the quality in preschool classrooms, the Infant Toddler Environment Rating Scale – Revised (ITERS-R) to evaluate quality in infant-toddler classrooms, and the Family Child Care Environment Rating Scale – Revised (FCCERS-R) to evaluate quality in family child care home (FCCH) settings. This study compared the average ERS rating of lower-level programs (one to three stars) to the average of higher-level programs (four to five stars) across Center Based Child Care and Preschool Programs (CBCCPPs) and registered FCCHs.<sup>46</sup> Programs recognized at four stars or five stars were designated higher-level programs for the purposes of the study, as Vermont recognizes those programs as eligible to be Prequalified Pre-Kindergarten providers under Vermont’s Act 166.<sup>47</sup>

Table 7-1 details the number of programs participating in Vermont STARS at the time the sampling frame was developed for this study in November 2015.

**Table 7-1. Number of STARS programs by level and program type**

Program Type	1-3 stars	4-5 stars	Total
<b>CBCCPPs</b>	101	344	405
<b>Registered FCCHs</b>	475	84	559
<b>Total</b>	576	428	964

Observations were collected by a team of Vermont-based observers hired and trained by Child Trends for this study. To increase the sample size for registered FCCHs, the analysis also utilized observations collected as part of the STARS rating process (see Appendix A for further details). Table 7-2 shows the total number of classrooms observed on the ERS tools by star level.

**Table 7-2. Number of programs with ECERS-R, ITERS-R, and FCCERS-R scores by level and program type**

	ECERS R	ITERS-R	FCCERS-R
<b>CBCCPPs</b>	<b>98</b>	<b>64</b>	-
1-3 stars	48	24	-
4-5 stars	50	40	-
<b>Registered FCCHs</b>	-	-	<b>65</b>
1-3 stars	-	-	39
4-5 stars	-	-	26 <sup>^</sup>

<sup>^</sup> Scores for nine of the 26 observations of four to five star registered FCCHs were provided by the Child Development Division, 2017.

Because of the geographic diversity in Vermont, the study also stratified recruitment based on the county where the program was located. Counties were clustered into four tiers with recruitment goals set for each tier.

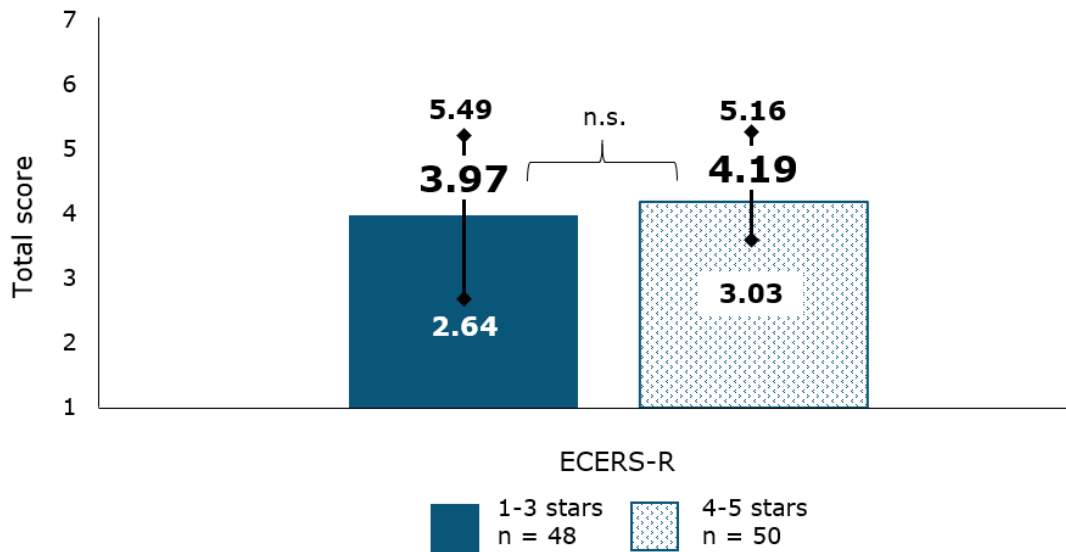
Independent t-tests were conducted to compare means between the two groups (i.e., one to three star programs versus four and five star programs), and effect sizes are reported when differences were significant. Key tables and graphs are presented throughout this chapter.

## To what extent did four and five star programs have higher observed program quality than one to three star programs as measured by the ECERS-R, ITERS-R, and FCCERS-R?

To answer this question, independent sample t-tests were used to compare the overall score on each ERS scale to determine if there were statistically significant differences between higher-level programs and lower-level programs. The study hypothesized that higher-level programs would have higher overall average scores on ERS scales when compared to lower-level programs.

Figure 7-1 illustrates the average score on the ECERS-R and the range for CBCCPPs by star level. The difference between the total scale average ECERS-R scores for lower-level programs (mean score of 3.97 and standard deviation of 0.63) and higher-level programs (mean score of 4.19 and standard deviation of 0.49) was not statistically significant ( $p > .05$ ).

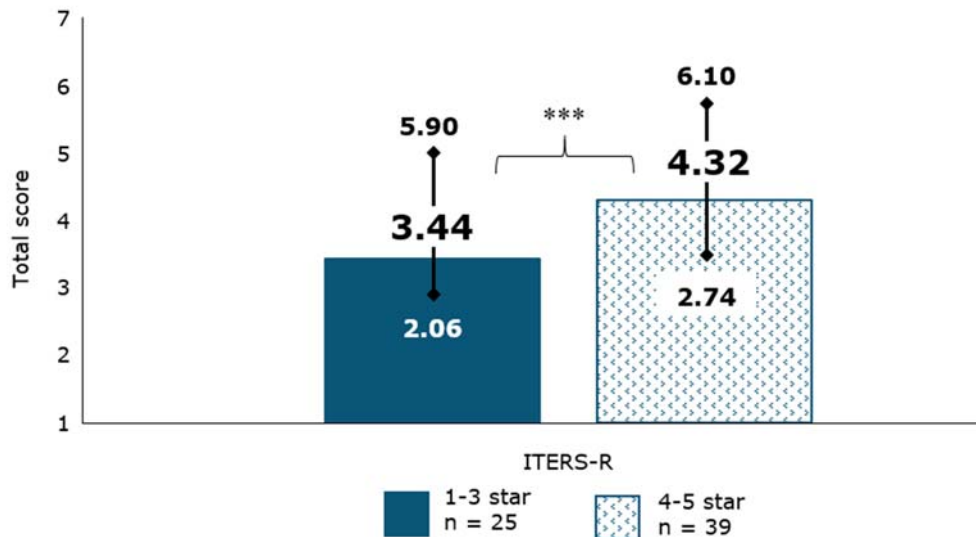
**Figure 7-1. Average ECERS-R overall scores by level**



Source: Child Trends observations in STARS classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

Higher-level CBCCPPs scored significantly higher ( $p < .001$ ) on the ITERS-R (mean score of 4.32 and standard deviation of 0.76) than lower-level programs (average score of 3.44 and standard deviation of 1.08; see Figure 7-2). The effect size for this difference, as measured by Cohen's  $d$ , was 0.98, which represents a large effect.<sup>48</sup>

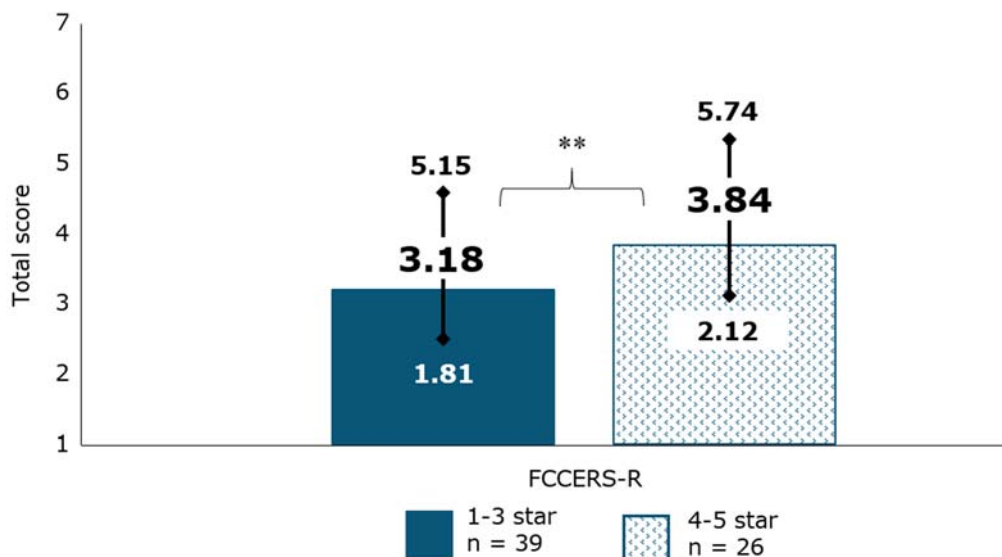
**Figure 7-2. Average ITERS-R overall score by level**



Source: Child Trends observations in STARS classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

Similarly, higher-level registered FCCCHs scored significantly higher ( $p < .01$ ) on the FCCERS-R (mean score of 3.84 and standard deviation of 1.13) than lower-level registered FCCCHs (mean score of 3.18 and standard deviation of 0.86; see Figure 7-3). The effect size for this difference, as measured by Cohen's  $d$ , was 0.67, which represents a moderate effect.

**Figure 7-3. Average FCCERS-R overall score by level**



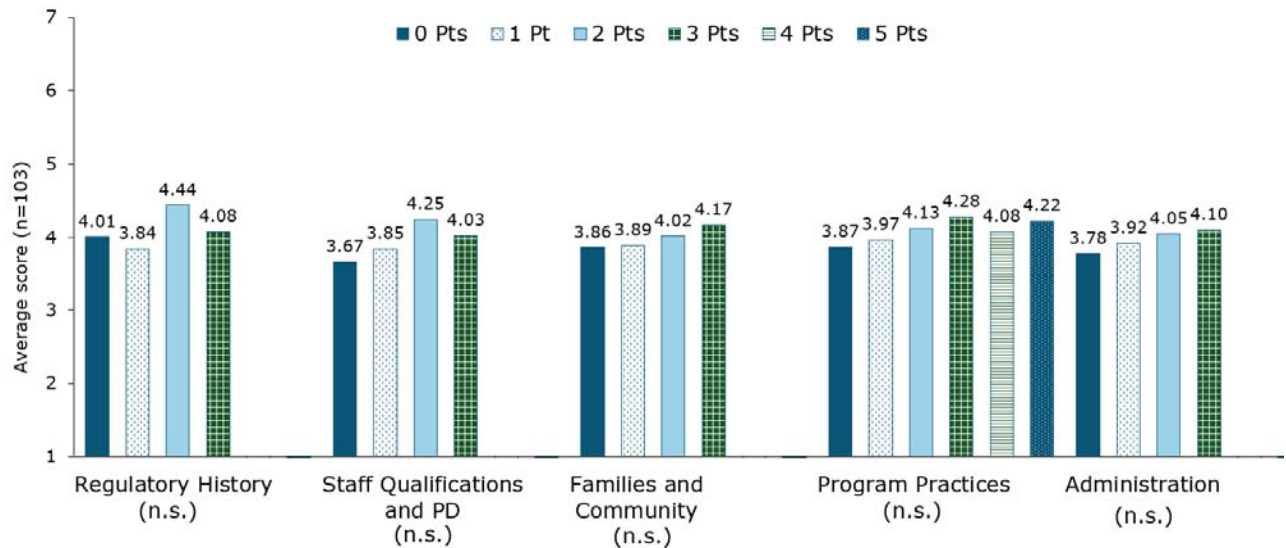
Source: Child Trends observations in STARS classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

## Were the quality components across the five STARS arenas associated with observed quality?

Since the associations between STARS levels and observational quality measures were inconsistent, the research team explored the extent to which the points earned by programs in quality arenas might be associated with overall scores on the observational measures of quality. To address this question, Child Trends used the Analysis of Variance (ANOVA) and post-hoc t-tests to compare the overall ERS scores (ECERS-R, ITERS-R, FCCERS-R) of programs based on the number of points the program earned in each of the five STARS quality arenas. The Child Trends team hypothesized that having a greater number of points in an arena would be associated with a higher overall ERS score.

As shown in Figure 7-4, there were no consistent patterns nor statistically significant differences on the overall ECERS-R scores based on the number of points earned in each arena. CBCCCPs tended to have similar ECERS-R scores regardless of the number of points earned in each quality arena.

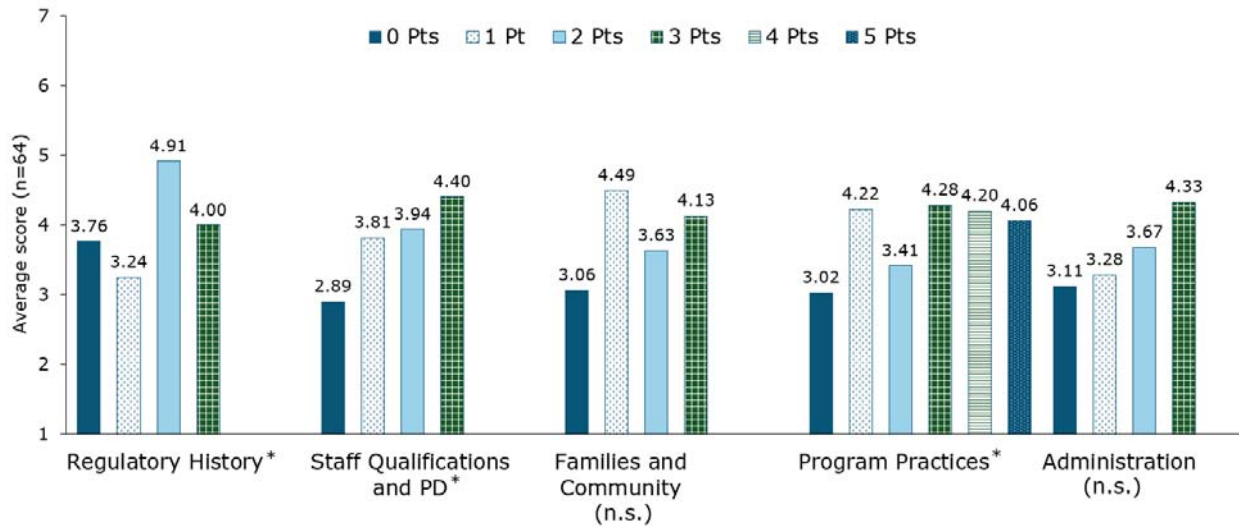
**Figure 7-4: Average ECERS-R overall score for CBCCCPs who earned various points in each arena**



Source: Child Trends observations in STAR classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

There were significant differences on the average overall ITERS-R scores based on the number of points in three of the five arenas (Regulatory History, Staff Qualifications, and Program Practices; see Figure 7-5). CBCCPPs with two points in Regulatory History had the highest overall ITERS-R scores (mean of 4.91), while CBCCPPs with three points in Staff Qualifications had the highest overall ITERS-R score (mean of 4.40). In the Program Practices arena, CBCCPPs with zero or two points had significantly lower ITERS-R scores than did CBCCPPs with one, three, four, or five points.

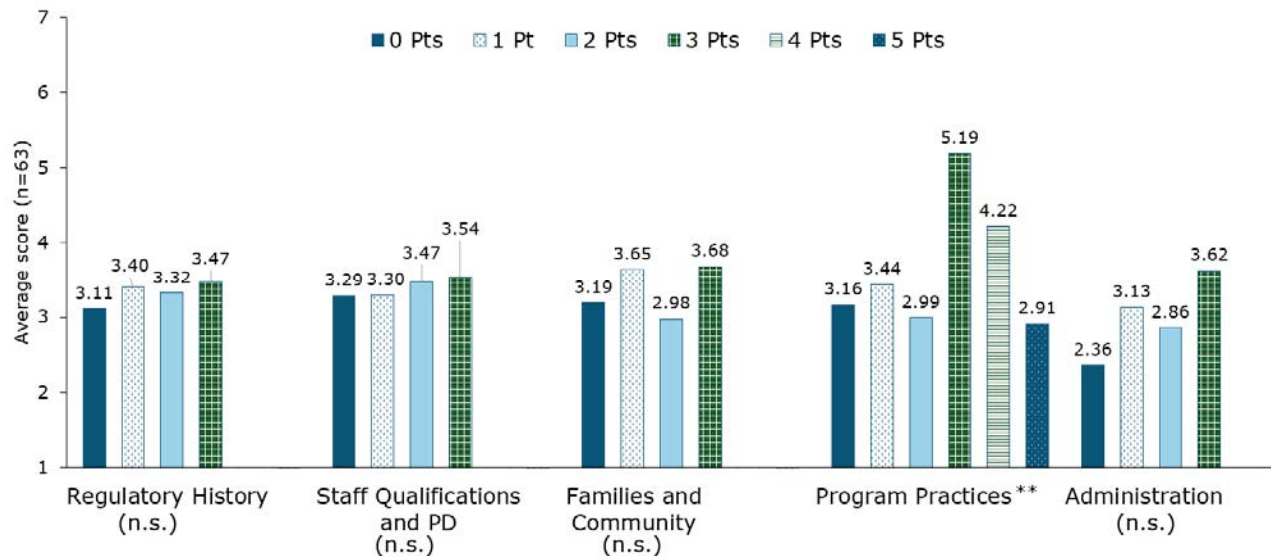
**Figure 7-5. Average ITERS-R overall score for CBCCPPs who earned various points in each arena**



Source: Child Trends observations in STAR classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

Similar analysis conducted on the FCCERS-R overall score showed significant differences between registered FCCHs based on the number of points earned in the Program Practices arena (see Figure 7-6). Registered FCCHs with three points in Program Practices had the highest overall FCCERS-R score (mean of 5.19).

**Figure 7-6. Average FCCERS-R overall score for registered FCCHs who earned various points in each arena**



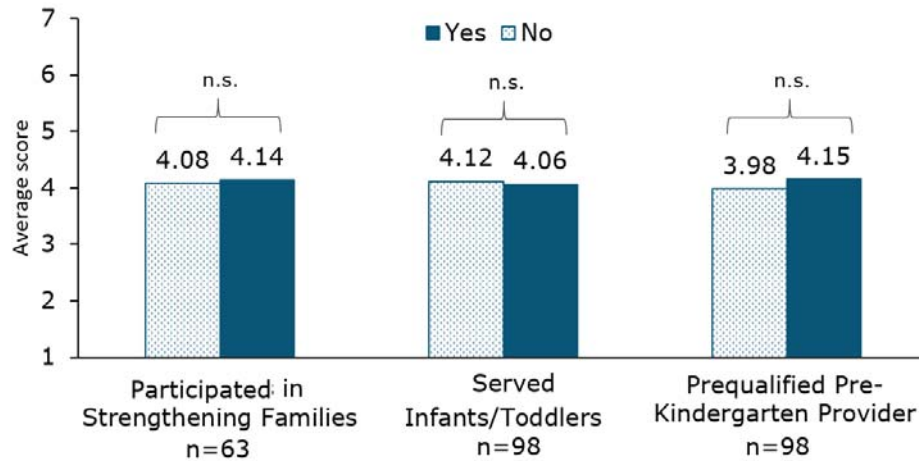
Source: Child Trends observations in STAR classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

## What were the program characteristics associated with higher-levels of observed quality?

One additional attempt to try to understand patterns of quality in STARS examined the extent to which programs characteristics might be associated with overall scores on the observational measures of quality. To examine this question, Child Trends ran independent sample t-tests to determine if there were significant differences in observed quality scores based on various program characteristics such as whether the program was a Prequalified Pre-Kindergarten program or participated in the Strengthening Families grant program (as identified in the STARS administrative database). For CBCCPPs that had received ECERS-R observations, Child Trends also examined if the overall average score differed if the program served infants and toddlers. Child Trends hypothesized that programs participating in the Strengthening Families grant program, recognized as a Prequalified Pre-Kindergarten provider, or serving infants and toddlers would have higher overall ERS scores.

As shown in Figure 7-7, there were no significant differences between the ECERS-R score by any of the key program characteristics.

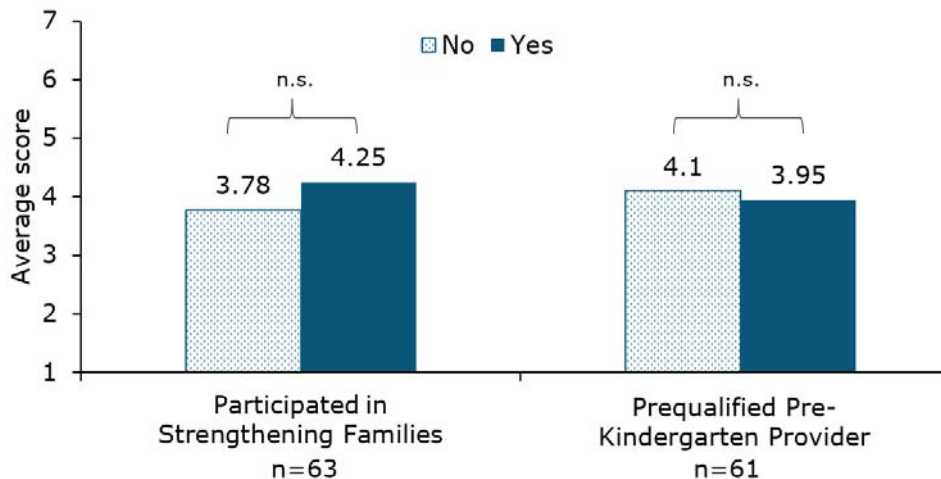
**Figure 7-7. Average ECERS-R score by program characteristics**



Source: Child Trends observations in STAR classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

There were no significant differences in ITERS-R scores (see Figure 7-8) based on differing program characteristics. CBCCPPs tended to score, on average, similarly regardless of whether they were a Prequalified Pre-Kindergarten provider or if they participated in the Strengthening Families grant program.

**Figure 7-8. Average ITERS-R score by program characteristics**

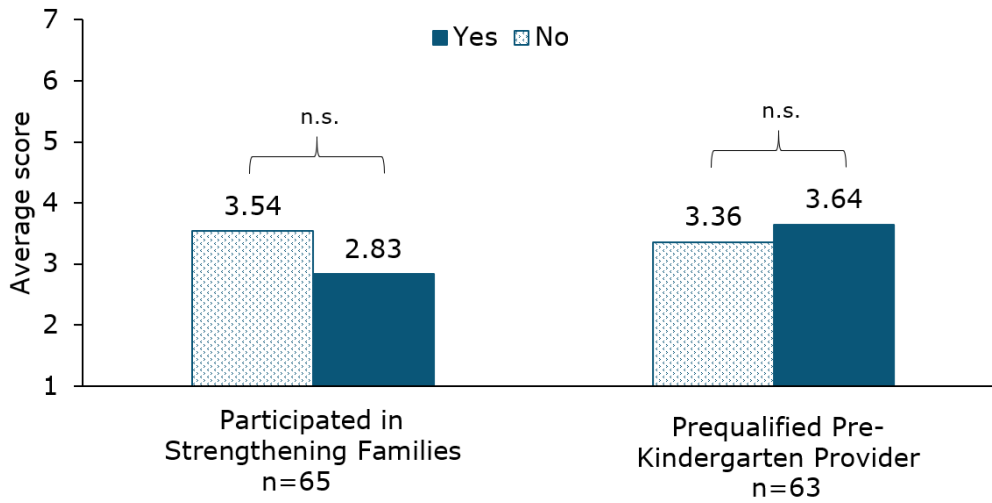


Source: Child Trends observations in STAR classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$



Registered FCCHs also did not score differently on FCCERS-R on average according to different program characteristics (see Figure 7-9).

**Figure 7-9. Average FCCERS-R score by program characteristics**



Source: Child Trends observations in STAR classrooms. Note: n.s. = not significantly different, \* =  $p < 0.05$ , \*\* =  $p < 0.01$ , \*\*\* =  $p < 0.001$

# Discussion and Recommendations

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Since 2014, Child Trends has worked with the Vermont STARS Evaluation Committee to conduct a validation and evaluation study of the state's QRIS. As a recipient of the Race to the Top – Early Learning Challenge (RTT-ELC) grant, Vermont committed to evaluating STARS as part of an ongoing process of continuous quality improvement. The purpose of this study was to understand how STARS is working to promote quality early childhood programs to achieve better outcomes for Vermont children. The results presented in the previous chapters are synthesized here in response to the two primary research questions guiding this study:

1. What were participants', mentors', and key stakeholders' perceptions of the Vermont STARS quality framework and quality improvement supports?
2. To what extent did the design of the Vermont STARS quality framework support a valid assessment of program quality?

## What were participants', mentors', and key stakeholders' perceptions of the Vermont STARS quality framework and quality improvement supports?

The Program Practices, Families and Community, and Staff Qualifications arenas were perceived to include the most important elements of quality across participants, mentors, and key stakeholders. When asked where they focused their quality improvement efforts, providers most frequently reported focusing on the Families and Community and Program Practices arenas. The majority of programs reported changing their learning environment because of joining STARS, but interestingly the changes they believed to be most important were related to staff training and professional development. Sixty-three percent of mentors believed that the Program Practices arena contributed most to program quality.

Providers, mentors, and key stakeholders reported mixed perceptions of the benefits, fairness, and accuracy of STARS. While most providers believed that STARS had been beneficial to their programs and almost all planned to continue to participate in STARS, slightly more than half of providers felt STARS was a fair, and slightly less than half felt STARS was an accurate recognition system. Mentors and key stakeholders echoed similar mixed perceptions of STARS. Approximately 60 percent of mentors believed that the STARS recognition process was fair, and less than half believed that the STARS recognition process was an accurate reflection of program quality. While most key stakeholders agreed that they would recommend that programs join Vermont STARS and that programs improved because of STARS, less than half agreed that the STARS recognition process was an accurate reflection of program quality.

Providers, mentors, and key stakeholders reflected on ways in which the quality improvement supports provided to STARS participants could be improved. Mentors did not report spending the most time on the activities they thought were the most important for providers. The most frequent activity mentors reported was helping providers understand STARS and fill out the application. However, mentors also reported the activity they believed to be most important to providers was assessing providers' strengths and areas of growth. In addition, the content of mentoring visits was not consistent across mentors. Over half of mentors reported that their approach was flexible and provider-led and that they followed no formal plan for mentoring providers. Communication between providers and time spent with providers and other staff members at programs varied depending on the mentor. Perhaps related to this finding, the quality improvement supports that providers reported were most helpful were related to STARS payments (as opposed to STARS mentoring). About two-thirds of providers reported working with mentors, and the activity they mostly worked on with their mentor was completing the STARS application. While the

majority of key stakeholders agreed that the quality improvement supports provided to programs to help them improve their level in STARS were meaningful, slightly less agreed these supports were adequate.

Providers, mentors, and key stakeholders provided insights about the quality components in STARS and about the rating structure. Providers largely felt that the current STARS quality arenas were appropriate measures of quality but also felt that additions such as health and wellness or healthy and nutritious meal practices would be beneficial. About two-thirds of mentors reported that health and wellness and special education practices should be recognized by STARS. About half of mentors (47%) suggested that STARS should also recognize healthy and nutritious meals, cultural engagement, and eco-friendly practices. Key stakeholders were also open about adding new areas to the STARS system such as criteria recognizing practices related to health and wellness and healthy and nutritious meals.

When asked about the STARS rating structure, more providers reported an appreciation for the flexibility of being able to choose where they focused their quality improvement efforts within the STARS arenas (i.e., a points or hybrid system) than those who agreed that programs at a certain STARS level should represent the same aspects of quality across all arenas (i.e., a block system). In contrast, more key stakeholders agreed that programs at a certain STARS level should represent the same aspects of quality across the STARS arenas (i.e., a block system) than key stakeholders who agreed it was important for programs to have flexibility within the STARS system (i.e., a points or hybrid system).

## Recommendations

As Vermont considers the overall findings and implications of this study, the study's researchers recommend exploring opportunities to engage providers, mentors, and key stakeholders in next steps. Based on survey results, these three key groups would like to see changes to the system that would increase the fairness and accuracy across all program types and streamline the application process for providers.

When considering the quality constructs that were most meaningful to the participants surveyed, providers, mentors, and key stakeholders felt most positively about the Program Practices and Families and Community arenas. Mentors and key stakeholders did not rate the Regulatory History or Administration arenas highly in terms of correlating with program quality. These perspectives will be valuable to keep in mind if changes are made to the quality arenas or indicators.

A well-designed "hybrid QRIS" may help balance the need for both flexibility and consistency. Providers valued the flexibility of the current hybrid system but mentioned that the accuracy of program quality between levels is not consistent. Mentors and key stakeholders agreed that program quality within a STARS level should become more consistent but also valued flexibility for programs to a lesser extent. One strategy for balancing flexibility and consistency is to consider a hybrid QRIS, which would require certain quality practices across all programs at the entry level(s) of the system and would allow for more flexibility through a points system at the higher-levels. Nationally, 21 of the 41 QRIS utilize a hybrid model, which has been an increasing trend over the past few years.<sup>49</sup>

Another recommendation is to consider investing more resources in the quality improvement supports offered to participating STAR programs. Just over half of providers had worked with a mentor, and most did not feel like their mentor spent enough time with them. Those who did work with a mentor felt that they were helpful, and mentors also believed that their work resulted in positive changes to program quality. Providers and mentors reported that the number one activity they worked on together was completing the STARS application. To ensure greater continuity across the M.A.T.C.H. mentor agencies, it is recommended that Vermont develop a STARS consultant manual that clearly articulates the roles, responsibilities, expectations, and activities in which STARS mentors are to engage with providers. Enhancing the quality improvement supports also include developing a (required) STARS mentor training and ongoing professional development opportunities designed to help mentors develop the specific skills and competencies needed to work with program directors/classroom educators. At the state level this may

also require examining the investment made in STARS mentoring to ensure that the investments and compensation provided align with the potentially increased expectations of these members of the STARS system.

## To what extent did the design of the Vermont STARS quality framework support a valid assessment of program quality?

The activities designed to address this research question aligned with national recommendations for assessing the validity of QRIS. Child Trends' approach to validation was informed by its experience conducting QRIS evaluations in multiple states and the Office of Planning, Research and Evaluation in the Administration for Children and Families, U.S. Department of Health and Human Services, which has defined key approaches for QRIS validation. A summary of findings related to three of these approaches (i.e., key concepts, rating structure, and rating outputs) is described below.

STARS quality components aligned with many other state QRIS with a few noted differences related to health and safety, teacher-child interactions, continuous quality improvement, and cultural and linguistic diversity. Comparing the STARS quality indicators to the national QRIS Compendium helped identify areas where STARS did or did not align with quality practices that were embedded in other QRIS. Based on Child Trends' analysis, a number of quality components were incorporated in STARS for center-based and home-based programs. In addition, STARS had several unique attributes, for example, the inclusion of community involvement indicators in the Families and Community arena. Child Trends' analysis also identified areas for Vermont to consider regarding the STARS arenas and indicators—specifically related to adding additional indicators, tools, or supports around health and safety, teacher-child interactions, continuous quality improvement, and cultural and linguistic diversity.

Since programs can choose the arenas in which they want to obtain points for a STARS rating, quality practices were not consistent across rating levels. All programs, but particularly programs rated one star or two star, tended to earn all the points available in the Regulatory History and Administration arenas and earn less or zero points in the other three arenas (Staff Qualifications, Families and Community, and Program Practices). Generally, Afterschool Programs (ASPs), Center Based Child Care and Preschool Programs (CBCCPPs) earned more points in each arena than did Registered and Licensed Family Child Care Homes (FCCHs). In addition, CBCCPPs with Head Start grants or national accreditation tended to earn a high amount of points in all arenas. CBCCPPs and FCCHs that were Prequalified Pre-Kindergarten providers looked similar to other programs earning three through five stars in regard to the points earned in each arena.

The rating process used to designate a STARS rating aligned with some but not all recommended best practices. The way the STARS application was designed, some indicators require sources of evidence that directly reflect the program's implementation of the specified activity. However, some of the quality arenas, particularly the Families and Community and Program Practices arenas, relied predominantly on self-reported information, which may lead to inaccuracies when assigning program ratings. It was also noted that the criteria used to review a rating application and ensure inter-rater reliability across program verifiers could be strengthened by documenting these procedures in a manual and developing a double coding process. The Vermont protocol for training and ensuring the inter-rater reliability of the STARS assessors (the individuals who conduct on-site observations of program quality) aligned with the developer's recommended best practices.

Based on the sample of providers who participated in this study, there was inconsistent evidence to support the extent to which the Vermont STARS rating structure differentiated between higher- and lower-quality programs. While significant differences were found on the ITERS-R and FCCERS-R scales between higher-level and lower-level programs, significant differences were not identified between rating levels on the ECERS-R scale. In addition, there were no significant associations between overall ECERS-R scores and the total number of points earned in each quality arena. When examining the associations

between the ITERS-R and FCCERS-R scores and points scored in specific quality arenas, there were some significant associations; however, the patterns of association did not follow an expected trajectory. For example, registered FCCHs that scored three points in Program Practices had the highest overall FCCERS-R score. However, registered FCCHs with four and five points in Program Practices had lower scores (instead of increasingly higher scores) on the FCCERS-R than registered FCCHs with three points.

In addition, when comparing the overall scores on ERS tools' various program characteristics, there were no significant associations to support the hypothesis that being a Prequalified Pre-Kindergarten provider participating in the Strengthening Families grant or serving infants and toddlers were related to overall scores on the ERS measures for CBCCPPs or registered FCCHs.

The research team considered several possible explanations for these findings. First, these analyses may be limited by the availability of programs at all levels of STARS. For example, the availability of CBCCPPs with preschool classrooms with lower star levels (e.g., one through three star) was limited. When grouping lower-level programs for the ECERS-R analysis, there was a higher portion of three star programs that may have increased the overall ECERS-R average score of the lower-level sample. It is also possible that quality practices recognized in STARS are not well-aligned with the ECERS-R scale or that lower-level programs are engaging in higher quality practices as measured by the ECERS-R but have not yet applied for a higher star level.

Another consideration is related to the range of ERS scores observed in the study sample. The range of overall scores in lower-level and higher-level programs was large, sometimes as much as two points or more. This wide range of overall scores within quality levels indicate that some programs are operating at higher-levels of quality but may not have many points in specific quality arenas that might closely align with the ECERS-R, notably the Program Practices arena.

These findings suggest that further discussion about the STARS rating structure may be warranted.

## Recommendations

If there is an opportunity to consider new or revised quality constructs in STARS, the research team recommends considering some of the noted practices identified in other state QRIS, specifically related to health and safety, teacher-child interactions, continuous quality improvement, and cultural and linguistic diversity.

If there is an opportunity to review the STARS rating structure, the research team recommends considering that most programs achieved all of the possible points available in the Regulatory History and Administrative arenas. As a result, these quality arenas are not functioning well to differentiate programs along a continuum of quality. Vermont could consider embedding these requirements in the eligibility or entry levels of the STARS system. Vermont should also consider that without a requirement that programs obtain at least a minimum level of points in each quality arena, the quality practices across star levels can vary. For example, it is possible to obtain a three star rating without obtaining any points in the Program Practices arena.

Another recommendation is to incorporate specified best practices in the STARS rating review process. Too many self-reported submission requirements may skew the STARS system's ability to accurately assess program quality. To strengthen these requirements, Vermont could develop rubrics for indicators for which written summaries or self-reported documentation is the best or only way to verify the activity. Vermont can also revise submission requirements for indicators that rely primarily on self-reported documentation, to the extent possible, to require more direct documentation.

Vermont should also develop an internal rating review manual for program verifiers that articulates the rating review process from start (i.e., what to do when a program is ready for a rating review) to finish (i.e., how the program is notified about their rating). This manual could be updated regularly to include decisions about specific scenarios that may arise when reviewing applications. In addition, training could be

developed based on the contents of the reviewer manual to ensure continuity among program verifiers' understanding of their roles, responsibilities, and procedures for reviewing STARS applications. The STARS office should also develop an inter-rater reliability procedure that includes a double-check review on a portion of the scoring worksheets and program documentation. This process will help ensure the reliability across independent reviewers and can help to identify potential challenges that may be commonly encountered by verifiers.

While the training and reliability process for STARS assessors aligned with best practices, Vermont might consider designating one individual as the anchor, especially if the state is considering incorporating new tools such as the ECERS-3 into the rating system. In addition, Vermont should consider reinforcing the ITERS-R and FCCERS-R training for STARS assessors with ongoing training provided by the tools' developers.

The study's researchers also recommend that Vermont take stock in the strengths and potential challenges of the structure of STARS. The independent assessment of observational quality in STARS programs indicates the STARS structure may be working for infant-toddler classrooms and registered FCCs but may not be working as well for preschool classrooms in CBCCPPs. This study may provide valuable data to the state that informs future conversations about the strengths of STARS, which can continue to serve as a foundation of the system, and about areas for continued quality improvement.

## Conclusion

The findings presented in this report highlight the many strengths of STARS and areas to consider for ongoing improvement. As noted in the background chapter of this report, Vermont has one of the nation's highest levels of overall participation in STARS among center- and home-based providers. Truly the Vermont provider community values the STARS recognition system and will likely play a critical role in informing next steps for this important state system.

Throughout the course of this study, Child Trends has shared findings from each of the evaluation and validation activities as they have been completed. The data and information presented in this final report has supported conversations about potential next steps for STARS. These conversations have led to an additional activity supported by Child Trends, which has involved utilizing existing administrative data to model potential revisions to the STARS structure and quality components. This unique analysis can demonstrate the distribution of programs across levels of STARS if the criteria within STARS were to be awarded in a different manner and requires relatively little effort to compare the "results" of the possible new models.

The STARS Evaluation Committee and the staff at the STARS office have worked closely to explore potential changes to STARS based on the findings shared in this report. Child Trends has continued to partner with Vermont in 2018 to model alternative recognition structures to inform future conversations about the STARS system.

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# Appendix A

## Methods

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## Overview

The Vermont STARS Validation Study employed a mixed method data approach to complete the objectives of the study. This section includes details of the following primary data collection methods used in this study:

- **Classroom observations:** Observations provided data about the quality of the classroom environment and interactions. This section reports the sampling methodology, recruitment strategies, and data collection procedures for conducting classroom observations.
- **Surveys:** Child Trends surveyed several different groups engaged with Vermont STARS. Surveys provided information about the perceptions of Vermont STARS from various perspectives. This section provides information about each of the groups invited to participate in the evaluation surveys, how the surveys were developed, and the data collection procedures.
- **Interviews:** Key staff who are a part of the team implementing or who may be supporting Vermont STARS were interviewed about their experiences. This section explains who was interviewed, the types of questions they were asked, and the protocol for conducting interviews.

## Classroom observations

In July 2016, the Vermont Child Development Division (CDD; Agency of Human Services) provided Child Trends with a list of all Vermont STARS programs recognized as of June 30, 2016. Child Trends also received a supplement sample of center-based programs serving infants and toddlers at the one star through three star levels in February 2017. The target populations of the classroom observations were teachers in Center Based Child Care and Preschool Programs (CBCCPPs) and registered Family Child Care Home (FCCH) providers.

**Table A-1. Planned versus actual classroom observation sample**

Population	Planned	Actual
CBCCPPs	100	99
Registered FCCHs	70	57

Source: Child Trends data collection, 2016-2017



## Recruitment

Directors of CBCCPPs and registered FCCH providers participating in Vermont STARS as of June 2016 were recruited to participate in this study. Directors and providers were contacted via email with a formal request to participate in the study. After the recruitment letters were sent, a member of the Child Trends team followed up with directors and providers over the phone to discuss their interest in participating. Email addresses and telephone numbers were accessed from administrative data provided by Vermont CDD. Lead program personnel (CBCCPP directors, managers, or the registered FCCH provider) were offered a \$50 incentive as thank you for participating in the study.

Programs that agreed to participate or that wanted to think more about participation received an Evaluation Information Sheet via email that contained more detail about the research activities. After a program agreed to participate, Child Trends worked with them to identify one preschool classroom and one infant-toddler classroom (if applicable in CBCCPPs) to participate. If more than one classroom served each age range of children, the participating classroom was selected at random. Classroom teachers were informed of the classroom observation through the director. After the initial recruitment phone call with the director, Child Trends emailed an Observation Visit Guide to the teacher providing them information about the study and what to expect on the day of the visit. Details related to scheduling and conducting the observation are included below in the data collection procedures section.

## Measures

Tools included the Early Childhood Environment Rating Scale – Revised Edition (ECERS-R), the Early Childhood Environment Rating Scale – 3<sup>rd</sup> Edition (ECERS-3), the Infant Toddler Environment Rating Scale – Revised (ITERS-R), and the Family Child Care Rating Scale – Revised (FCCERS-R). The Environment Rating Scales (ECERS-R, ECERS-3, ITERS-R, FCCERS-R) are tools developed by Thelma Harms, Richard Clifford, and Debby Cryer of the University of North Carolina, Chapel Hill. Each rating scale is designed to assess the quality of the child care environment for a specific age group and child care setting. Each rating scale is made up of seven subscales focusing on different aspects of the child environment: Space and Furnishings, Personal Care Routines, Listening and Talking, Activities, Interaction, Program Structure, and Parent and Staff. Observations result in seven subscale scores and an overall score of 1-7; 1 indicating inadequate care, 3 indicating minimal care, 5 indicating good care, and 7 indicating excellent care (as defined by the scales' authors).

## Field team training, communication, and supervision

Child Trends hired five staff (the “field team”) to conduct observations in CBCCPPs and registered FCCHs across the state. The Child Trends field team was trained in using the data collection tools required for classroom observations. The field team was also trained on other protocols such as data security, mandated reporting procedures for suspected or known child abuse and neglect, and research procedures for maintaining confidentiality and the protection of human subjects. Observers were also trained on project specific Child Trends protocols which included:

- Scheduling observations;
- Data collection procedures beyond what is required for the tools being used (i.e., other survey data to be collected, procedures for interacting with teachers, children, etc.);
- Online data collection entry (including how to enter collected data and how to enter scheduling information); and
- Mailing hard copies of the data to a Child Trends office.

Communication and supervision of field team consisted of weekly check-in calls, reviewing and approving timesheets, and reviewing and approving expense reimbursements. The weekly check-in calls provided an opportunity for the field team supervisor, scheduler, and the field team to troubleshoot situations that arose in the field and discuss reliability procedures and observation logistics. Additional feedback and support were offered to each field team member on a one-on-one basis by phone or email.

## Mary Johnson Children's Center

Child Trends hired Mary Johnson Children's Center (MJCC) to perform several roles in the Vermont STARS Evaluation. MJCC trained the Child Trends field team on the Early Childhood Environment Rating Scale – Revised Edition (ECERS-R). An MJCC staff member attended the Family Child Care Environment Rating Scale – Revised (FCCERS-R) training with a member of the Child Trends field team. MJCC also conducted reliability visits with the field team for ECERS-R and FCCERS-R observations.

## Data collection procedures

All observational visits were conducted during October 2016 and June 2017. Child care centers received an observation using the ECERS-R and, if applicable, the ITERS-R. Four and five star CBCCPPs also received ECERS-3 observations.

Participating four and five star programs received an ECERS-3, ECERS-R, and, if applicable, an ITERS-R observation. The first 50 programs recruited were asked to participate in a simultaneous ECERS-3 and ECERS-R observation. The ECERS-R data were used for the validation study. The ECERS-R and ECERS-3 data were used for a separate ERS comparability study.

Observations were conducted in family child care homes using the FCCERS-R. To increase the sample size of registered homes, observations collected as part of the STARS rating process were also utilized.

To schedule each observation, Child Trends staff called programs to ask them to identify a day to have the observation(s). Each observational visit lasted approximately three hours and took place between the hours of 8:00 AM and 11:30 AM. Programs receiving an ECERS-R and ECERS-3 observation were conducted on the same day.

## Inter-rater reliability

MJCC conducted ECERS-R and FCCERS-R reliability observations with the field team. Members of the Child Trends field team attended ECERS-3 and ITERS-R reliability observations together. Reliability observations were conducted every tenth observation per observer or every three months, whichever happened first. Observers were deemed reliable if they achieved 85 percent consensus with the anchor observer. If the field staff did not achieve reliability at the 85 percent percentile, they were required to conduct another reliability observation. If an observer did not achieve 85 percent reliability during the second reliability observation, the observer was required to undergo reliability testing over the course of three days conducting observations with an anchor observer.

## Data checking and feedback reports

The score sheet for each classroom that participated in an ERS observation for this study was checked by Child Trends staff. After a score sheet was received, a Child Trends staff member checked that all indicators were marked and that all items were calculated correctly. If any indicators were missing, the observer was contacted; if items were calculated incorrectly, then the data checker would make necessary corrections. After checking the physical score sheet, the data checker then checked the scores in the Child Trends online data collection system, made needed corrections, and documented corrections that were made.

After each observation was completed and scores were assigned, programs received a feedback report. The feedback report provided classroom teachers and family child care providers with their ERS scores, information on how to interpret their scores, and highlights of strengths and potential areas for improvement. Child Trends staff were responsible for reviewing all feedback reports. This process involved checking all feedback report sub-scores and total scores against the scores reported in Portal. Child Trends staff then made needed changes to the feedback report scores as well as grammar and copy-editing changes.

## Surveys

In collaboration with the Vermont CDD and the Agency of Education, Child Trends developed surveys for the following groups:

- Vermont STARS Providers (*Provider survey*)
- Vermont STARS Mentors (*Mentor survey*)
- Vermont STARS Key Stakeholders (*Key stakeholder survey*)
- Teachers, CBCCPP directors, and registered FCCH providers participating in the validation study (*Validation surveys*)

While specific content and logistics of each survey differed, all were administered through the Survey Monkey online survey platform, and all respondents were offered an incentive for their participation.

The survey data were analyzed using Microsoft Excel and SAS software. Frequencies, percentages, or averages were calculated for quantitative responses. Respondents could leave questions unanswered, and many questions permitted respondents to provide multiple responses. Qualitative responses were analyzed using open coding techniques to identify common themes. For questions where quantitative and qualitative data were both collected (i.e., one of the response choices was “other” – where respondents could specify their response), qualitative responses were either recoded into the initial response categories or analyzed to identify additional themes.

### Provider survey

The provider survey went to all providers participating in Vermont STARS with a one star through five star rating. Examples of questions asked included:

- **Program information:** Is the program full/does it have a waitlist? How many children are enrolled? How many children in the program are receiving other services? How many children in the program are on an IEP or are dual language learners?
- **Perceptions of Vermont STARS:** How does the experience with Vermont STARS compare with expectations? What do providers think the primary purpose of Vermont STARS is? What is the impact of Vermont STARS?
- **Perceptions of the rating process:** How do providers feel about the rating process? What are common challenges? What suggestions do providers have for improving the rating process?
- **Perceptions of quality improvement efforts:** Where do providers focus their quality improvement efforts? What changes had providers made as a direct result of joining Vermont STARS?
- **Perceptions of coaching and mentoring supports:** How much time do providers spend with mentors? How do providers rate the helpfulness of Vermont STARS mentors and other quality supports? What are the barriers and challenges? What additional training needs do providers have?

On April 7, 2016, Child Trends sent the survey to all providers for which contact information (n=1,012) was obtained. The survey stayed open for four weeks, closing on May 9, 2016. When the survey closed, 596 providers had responded, (59% response rate). Respondents were entered into a lottery to win either one of many \$35 Amazon gift cards or one \$250 Amazon gift card. Four emails were sent to providers reminding them to complete the survey (on April 14, April 22, April 28, and May 5).

## Mentor survey

The mentor survey included questions about mentoring for Vermont STARS and questions about the M.A.T.C.H. Knowledge Areas and Competencies. Mentors answered different sets of survey questions depending on if they completed the M.A.T.C.H. Self-Assessment tool. Examples of questions included:

- **About your role:** How much experience do mentors have, and do they play more than one role? What activities are most important to your work with providers?
- **Training and ongoing support:** What training have mentors received to prepare them to mentor for Vermont STARS, and what additional trainings would be helpful? How helpful are the tools/materials/resources provided to mentors? How do mentors work with their supervisors/mentors/coaches (e.g., frequency of communication, length of visits)? What is the content of the meetings with supervisors/mentors/coaches?
- **M.A.T.C.H. Knowledge Areas and Competencies:** What are mentors' perceptions and experiences of the M.A.T.C.H. Self-Assessment tool?
- **Working with providers:** How do mentors work with the providers on their caseloads (e.g., frequency of communication, length of visits)? What activities and strategies do mentors use to support ECE providers in improving quality?
- **Perceptions of Vermont STARS:** What are mentors' perceptions of Vermont STARS and the role they play in the system? What are mentors' perceptions of Vermont STARS arenas?

Contact lists including mentors' email addresses were provided to Child Trends by various mentor agencies. On April 7, 2016, Child Trends sent an online survey to all early childhood mentors in Vermont for which working email addresses were obtained (n=51). The survey remained open until May 9, 2016 (four weeks) during which time 25 respondents completed surveys (49% response rate). Participating mentors were entered into a lottery to win either one of many \$35 Amazon gift cards or one \$250 Amazon gift card. Four emails were sent to mentors reminding them to complete the survey (on April 14, April 22, April 28, and May 5).

## Key stakeholder survey

The key stakeholder survey was intended for all individuals involved with Vermont STARS or the Vermont early care and education system. The survey included questions about key stakeholders' perceptions and ideas about various aspects of Vermont STARS implementation. Examples of questions included:

- **Affiliation and role:** What are respondents' roles or relationship to Vermont STARS or the early care and education community?
- **Perceptions of Vermont STARS:** What are key stakeholders' perceptions of Vermont STARS and the role they play in the system? What are key stakeholders' perceptions of Vermont STARS arenas?

On June 23, 2016, Child Trends sent an online survey to key stakeholders with valid email addresses (n=97). The survey remained open until August 18, 2016 (four weeks), during which time 63 respondents completed surveys (65% response rate). Two emails were sent to key stakeholders reminding them to complete the survey (on July 8 and July 15).

## Verification interviews

Interviews were conducted with key staff from MJCC who are engaged with Vermont STARS verification procedures. These procedures included the process of awarding a STARS rating to a program or provider and the process for conducting classroom-level observations with the ERS. Topics included:

- **Verification process/process of rating assignment:** What is the level of familiarity with the details of the Vermont STARS rating verification process? What aspects of the verification process are successful? What are some of the barriers and challenges? What are some suggestions for improving the application?
- **ERS rating process for STARS:** What ongoing support and training do you receive? What processes do you engage in to maintain reliability? What feedback do you provide to STARS programs? What challenges do you face as an ERS assessor? What are some suggestions for improving the ERS rating system?

Interviews were conducted by four Child Trends researchers on March 24, 2016 and June 1, 2016.

All questions in the interview protocol were open-ended to encourage respondents to voice their thoughts and opinions. Interview responses were documented through notes and audio recordings. Child Trends researchers reviewed the responses to each question to identify and code themes that emerged, which were then reviewed by another member of the analysis team. When there was a discrepancy in coding, the two researchers met to discuss and resolve the discrepancy.

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<sup>41</sup> STARS Application page 10.

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