

2021

TEXAS CHILD CARE COST OF QUALITY PRICE MODELING

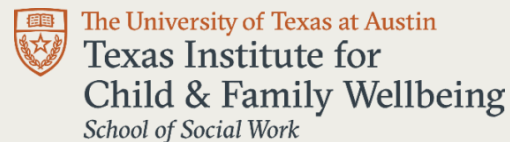
Final Report



2021 Texas Child Care Cost of Quality Price Modeling Report

Final Version

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GLOSSARY OF TERMS

- Accredited** As used throughout this document, accredited refers only to child care providers with national accreditation bestowed by one of seven accrediting organizations, including NAEYC and others listed in the Sample of Child Care Facilities section. Some accredited providers are also Texas Rising Star certified.
- Certified** As used in this document, certified refers only to providers with Texas Rising Star certification, including a designation as a Two- Three- or Four-Star provider. Some certified providers are also nationally accredited.
- Non-Accredited** This describes the comparison group of providers used to provide context when examining outcomes for accredited providers. Non-Accredited includes only providers who have neither national accreditation nor Texas Rising Star certification.
- Non-Certified** This refers to the comparison group used to provide context for outcomes among Texas Rising Star Certified facilities. Non-Certified includes only providers who accept subsidies and who have neither national accreditation nor Texas Rising Star certification.
- Higher Quality** This term is used throughout this document to refer generically to providers who have either national accreditation or Texas Rising Star certification, or both.
- Baseline** This term is used to refer to prices charged by providers of child care that at a minimum meet state licensing standards. In the context of calculators presented below, the baseline may refer to providers who have none of the quality addressed, such as external supports.
- Metropolitan** Describes an urban area with 50,000 or more inhabitants
- Micropolitan** Describes an urban area with a population of at least 10,000 but fewer than 50,000 inhabitants. Micropolitan areas of Texas include Alice, Andrews, Athens, Bay City, Beeville, Big Spring, Bonham, Borger, Brenham, Brownwood, Corsicana, Del Rio, Dumas, Eagle Pass, El Campo, Fredericksburg, Gainesville, Granbury, Hereford, Huntsville, Jacksonville, Kerrville, Kingsville, Lamesa, Levelland, Lufkin, Marble Falls, Marshall, Mineral Wells, Mount Pleasant, Nacogdoches, Palestine, Pampa, Paris, Pecos, Plainview, Raymondville, Rio Grande City-Roma, Snyder, Stephenville, Sulphur Springs, Sweetwater, Uvalde, and Vernon
- Structural quality components** Structural quality indirectly influences child development by creating conditions that support quality environments and interactions with children. Examples include staffing ratios and staff turnover; staff education and experience; staff training expenses; earnings and benefits; and curriculum, assessment, and staff planning time.

EXECUTIVE SUMMARY

This study explores the incremental costs of providing quality child care in the State of Texas, relative to care that merely meets state licensing standards. It does this in part by measuring and modeling the prices charged for higher-quality care among certified Texas Rising Star and other nationally accredited providers, relative to prices charged by similarly situated providers who are not Texas Rising Star certified nor nationally accredited. In addition to the overall cost of quality, this study attempts to determine the relative contributions to costs of individual structural components of quality.

The empirical approach of this study differs from some of the child care cost literature in that this study attempts to measure the *costs* of providing care based on extensive modeling of the *prices* charged. Selected samples of home- and center-based child care facilities were surveyed to capture important quality factors and pricing information. In addition to the surveys, researchers assembled extensive data from various publicly available sources to develop statistical models of the price of quality child care. These models allow the marginal price of providing quality care to be estimated using a combination of factors specific to individual facilities, as measured by the survey, as well as to the local markets in which they operate, as measured by the public data and varying geographically.

This report presents several calculators focused on factors related to the structural quality of ECE programs: staffing ratios and staff turnover; staff education and experience; staff training expenses; staff earnings and benefits; and curriculum, assessment, and staff planning time. The calculators are intended to assist providers, Local Workforce Development Boards, and the State in understanding cost drivers for improving quality as well as revealing which structural quality factors are typically used by providers to reach higher quality tiers. The calculators statistically control for differences in external supports among facilities that receive services, donations, participate in the Child and Adult Care Food Program, or simply benefit from being associated with churches or other organizations. Controlling for such extraneous costs increases the precision of the estimated price of structural quality factors of interest to this study.

Center calculators show that overall, prices charged for higher-quality care provided by nationally accredited centers in 2020 were 20 to 25 percent higher than prices charged for lower-quality care from non-accredited centers. Similarly, among center providers that accept subsidies, prices charged for higher-quality care at Four-Star Texas Rising Star certified facilities in 2020 were routinely about 18 to 22 percent higher than lower-quality care at non-certified centers. The 2021 follow-up survey confirmed these findings but with slightly larger pricing differentials. In the homes portion of this study, the price of quality care in 2020 was not related to the quality tier. However, this study component suffered from low response rates due to timing with respect to the pandemic. Further research in a post-pandemic environment should help to establish whether this tendency represents a real finding or is simply a product of chance and a small sample.

Annual market rate surveys conducted over the last 20 years have shown that child care pricing varies widely in Texas based on geography, and this study again confirms that the most expensive child care in the state occurs in major metro areas. One promising method of capturing and representing such pricing differences lies in models that categorize geography based on which of 7 major metropolitan areas a facility is in, with additional categories for minor metropolitan, micropolitan, and rural areas. Other approaches are revealed to be viable also, including simplified versions that rely on

average local real estate prices. Finally, extensive modeling of market rate microdata along with publicly available data characterizing the populations of different areas led to models that estimate local pricing of care, and pricing of higher quality designation, at the county level, which is then aggregated to provide local workforce board-level prices.

Central to the practice of quality care is a stable, consistent, and nurturing relationship between child and teacher. The findings of this study support this tenet in that nationally accredited centers reported employing fewer part-time staff and had a lower rate of staff turnover compared to lower-quality non-accredited centers. The differences between Four-Star centers and lower-quality non-certified centers followed a similar pattern in the use of part-time staff and staff turnover rates.

Surprisingly, the center data on children per teacher ratios in 2020 revealed no statistically significant relationship with pricing. In contrast to the expectation of the standard ECE quality model, accredited and Texas Rising Star certified centers did not on average care for fewer children per teacher. Also, disappointingly, children per teacher ratios were not sufficiently related to pricing to produce a compelling calculator.

One area in which higher-quality accredited centers stand out is in greater educational achievement of staff, greater likelihood of CDA credentialing, and lesser utilization of inexperienced staff members. While this was true for Texas Rising Star Four-Star centers, Two- and Three-Star centers barely distinguished themselves from non-certified centers on this measure, as they did on many other measures. Unfortunately, the analysis of center data did not support the utilization of staff education and experience to estimate child care pricing, as the effects were weak.

Perhaps the area in which higher-quality centers most distinguished themselves from lower-quality centers in 2020 was in wages and benefits provided to staff. Accredited and Four-Star certified centers were more generous in terms of hourly wages, as well as in benefits provided, including dramatic differences in health insurance, retirement plans, days off, and tuition assistance. Our follow-up survey and accompanying data analysis found that higher-quality providers were more likely to remain open throughout the pandemic.

Staff earnings and benefits factors played significant roles in one calculator, indicating strong and predictable relationships to prices charged for care. Not surprisingly, prices charged for care increase as teachers' hourly wages are increased. As one might expect, the provision of health insurance had the biggest measurable impact on the pricing of care.

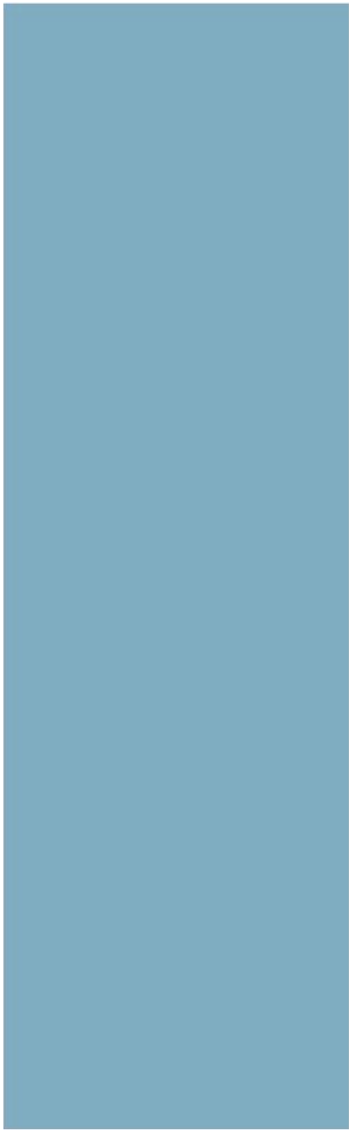
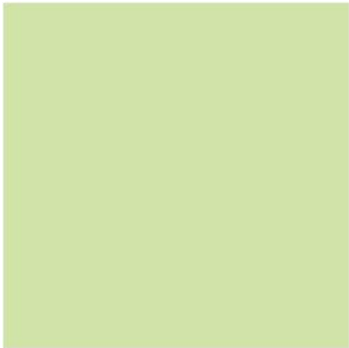
Although reported use of a curriculum, or a prepared set of learning and play activities, was high among all centers, accredited and certified centers were still more likely to utilize curricula. Higher-quality centers were also more likely to use formal assessments and less likely to use informal assessments, as compared to lower-quality centers. Texas Rising Star certified centers have the option of using a curriculum provided free to Texas Rising Star providers, which could be responsible for unexpected results in calculators that assess curriculum use and pricing. Regarding assessments, those centers that conduct formal assessments charge the highest prices for care, informal assessments are the second highest, and those not conducting assessments have the lowest priced care. Also as expected, the number of paid planning hours provided to teachers each week is associated with higher pricing.

Although there is some evidence that online training is associated with reduced pricing of care provided and conference fees are associated with higher pricing, this was not sufficiently compelling to support a calculator featuring pricing of training factors.

Overall, the evidence reported here is consistent with a policy of significantly increasing reimbursement rates for child care provided by Texas Rising Star Four-Star centers. As of this writing, TWC has recently done just that by increasing the maximum Four-Star reimbursement to at least the 75th percentile of market rates, and higher for the youngest children. Closing this gap should both serve to reward centers for achieving Four-Star certification with a reimbursement that better matches the cost of providing quality care, as well as incentivize Two- and Three-Star certified centers to increase the quality of care they offer to reach the Four-Star level. It could also reduce the segmentation of the Texas child care market based on those who do and do not provide care for subsidized children. There is no evidence in this report to suggest that Two-Star or Three-Star care is presently inadequately reimbursed.

Although the homes cost of quality survey turned up some interesting findings, the evidence was insufficient to evaluate the adequacy of reimbursement rates for Texas Rising Star tiers among home providers. A new iteration of this survey, ideally to be conducted in a post-pandemic world, would 1) increase the homes sample size, and 2) oversample Two- and Three-Star homes to get good estimates of the pricing of providing quality care at these tiers.

Perhaps the most impressive findings from the follow-up survey were derived from CCR data. At about 22 months into a pandemic, about 1 in 5 of Texas' Registered Child Care Home providers were no longer in business. And somehow, despite our inability to fully explain it, nationally accredited and Texas Rising Star Four-Star providers were far more likely than lower-quality providers to remain open and provide care throughout the pandemic.



Introduction & Overview

INTRODUCTION

Researchers from the Ray Marshall Center (RMC), LBJ School of Public Affairs and the Texas Institute for Child and Family Wellbeing at The University of Texas at Austin conducted a study of the cost of providing quality child care in the State of Texas. The purpose of this study was to provide estimates of the cost of providing higher-quality care under Texas Rising Star, relative to other child care providers who are not Texas Rising Star certified. Based on an approach that includes extensive price modeling, this report provides estimates of the overall costs of providing quality child care, as well as a more granular look at the pricing implications of a broad variety of structural quality factors.

REPORT STRUCTURE

A brief review of relevant literature and the history of quality rating systems is presented in this section, followed by sections on study design and survey administration. Following that is a section presenting analysis and pricing calculators, including estimates of the overall price of quality care in 2020, as well as estimates of the marginal pricing of individual structural components of quality. Results from a small follow-up survey are also included, which replicates the findings on the pricing of quality care using 2021 data, describes providers' responses to COVID-19, and examines factors related to the resilience of providers. A concluding discussion of the study results is followed by sources and two appendices containing details of the data analysis as well as copies of the survey instruments.

BACKGROUND AND LITERATURE REVIEW

The science of early childhood development (birth through age 8) presents evidence indicating that children's health, development, and early learning provide a foundation for continued learning. Young children experiencing positive interactions and learning experiences accrue future benefits as they grow, while children who lack these experiences or suffer from undue stress face later barriers to learning and social-emotional growth. Healthy development during these early years requires reliable, positive, and consistent interactions between the developing child and caring adults (National Research Council, 2015). Extensive evidence demonstrates that high-quality education and care positively impact children's cognitive, language, and social-emotional development (Burchinal et al, 2008; Melhuish et al, 2015). Further, exposure to adversity and stress—experiences disproportionately prevalent in low-income communities—may have direct and potentially long-term negative effects on the structure of brain development (Hertzman, 2012), an effect that may be mitigated by consistent relationships with caring adults.

Texas Children

In 2019, approximately 1,431,000 (59%) Texas children under the age of six lived in a household with all available parents in the labor force; likewise, approximately 1,875,000 (76%) Texas children between the ages of 6 to 12 lived in a household with all available parents in the labor force

(Kids Count, 2019).¹ These estimates represent approximately 3,306,000 children potentially needing care; furthermore, approximately 29 percent of these children live in households that are low-income working families (Kids Count, 2019).² For children younger than six, 29 percent (approximately 696,000) live in low-income working families (Kids Count, 2019). Families rely on early childhood professionals to provide positive interactions and experiences that young children need to thrive.

Available Child Care in Texas

In Texas, the need for child care greatly outpaces the available licensed and regulated care. The Texas Health and Human Services Commission (HHSC) is responsible for the regulation of all child care settings across the state of Texas, including the child care settings chosen for this study: licensed child care centers and licensed and registered child care homes. Table 1 presents for FY 2019, the number of providers and provider’s capacity for each category of child care from which the study sample was randomly selected. With about 1.4 million children under the age of six living with families where all available parents are working, the need for additional licensed and registered care for the youngest and most vulnerable citizens of Texas is evident.

Table 1. Texas Child Care Centers and Homes: FY 2019

Child Care Regulation Operation Type	FY 2019	
	Count	Capacity
Licensed Child Care Centers*	9629	1,082,968
Licensed Child Care Home	1,624	19,344
Registered Child Care Home	3,290	38,132
Total	14,543	1,140,444

Source: Texas Health and Human Services Commission. *Licensed child care centers category includes types of programs that were excluded from the sample i.e. Head Start and Early Head Start programs.

In addition, for many working low-income families the cost of child care is burdensome. In Texas, the pricing of available child care varies by region with the large metro areas having the most expensive child care while more rural areas and especially the Rio Grande valley have the least expensive care. Across the state of Texas, the average daily price of full-day infant center-based care is \$35.61, and the average full-day price of center-based toddler care is \$29.74 (Texas Workforce Commission, 2020). At these rates, in 2020 a family of three making 200% of the federal poverty guidelines (\$43,440) would have spent on average \$9,395 for one year of full-time infant care, nearly

¹ For children living in a married-couple family or subfamily, this means that both parents are in the labor force. For children living in a single-parent family or subfamily, this means the resident parent is in the labor force. The civilian labor force includes persons who are employed and those who are unemployed but looking for work. Source: <https://datacenter.kidscount.org/>

² Low income family means: children under age 13 living in families that met two criteria: (1) the family income was less than twice the federal poverty level; (2) at least one parent worked 50 or more weeks during the previous year. Source: <https://datacenter.kidscount.org/>

21 percent of the family gross income, and \$7,848 for one year of full-time toddler care, approximately 18 percent of the family gross income.³

Child Care and Development Fund

The mission of the Child Care and Development Fund (CCDF)—a federally funded block grant to state, territory, and tribal governments—is to provide child care subsidies to help eligible low-income families access child care and more generally to improve the quality of care across the broader market.⁴ In Texas, the Texas Workforce Commission (TWC) is the lead agency for administering CCDF through 28 local workforce development boards. Local CCDF programs are supported through a combination of federal, state, and for some communities, local funding as well. In 2014, the reauthorization of the Child Care and Development Block Grant Act included an increase in the share of CCDF funds dedicated to initiatives that improve the quality of care (CCDBG Act, 2014). And since reauthorization, Texas’ annual federal allocation for CCDF has risen from \$475 million in FY2014 to \$867 million in FY2021.⁵

Definition of Early Childhood Quality Care

Research measuring quality care and the association between quality care and child outcomes identifies two broad dimensions of quality that support child development: structural and process quality measures (Friedman & Amadeo, 1999; Halle et al, 2010; Vandell & Wolfe, 2000; Gootman & Smolensky, 2003). Structural quality measures include group size and adult-child ratio; staff education and credentials; the physical environment and materials; and training and professional development (Slot et al, 2015). Process quality includes children’s daily experiences while they interact with caregivers, the environment, curriculum, and the pedagogy of curriculum implementation (Slot et al., 2015). Structural and process quality measures are specific to the age and development of groups of children and apply to both centers and homes. Research suggests that early development is directly influenced by process quality and indirectly by characteristics of structural quality in that structural quality program aspects create conditions to support quality environments and interactions with children (Burchinal et al, 2015). Quality teacher-child interactions and child care environments lead to larger gains in children’s cognitive and social skills (Mashburn, 2008; Pianta et al, 2009).

The Early Childhood Education (ECE) literature has identified specific structural and process program features that support quality. A literature review conducted by Burchinal and others (2015), provides replicated evidence with moderate effect sizes for several quality factors as they relate specifically to child outcomes:

1. Group sizes and adult-child ratio: Programs with large numbers of children per teacher and with larger group sizes have been reported to be of lower quality and to produce more behavior problems and smaller gains in academic skills.

³ Federal Poverty Guidelines are available at: <https://aspe.hhs.gov/2020-poverty-guidelines>

⁴ Administration for Children and Families, Office of Child Care, OCC Fact Sheet: <https://www.acf.hhs.gov/occ/fact-sheet-occ>

⁵ <https://www.acf.hhs.gov/occ/data/ccdf-state-and-territory-funding-allocations>

2. Staff education and credentials: Programs with care providers with higher levels of education have been shown to be of higher quality and to produce larger gains in academic skills (although researchers suggest confounding factors may influence this finding).
3. Curriculum and staff training in curriculum pedagogy: Programs using an evidence-based curriculum along with training or coaching of staff on curriculum implementation tend to have greater gains in children’s literacy, math, and social skills. Curriculum planning and implementation are linked to child assessment. The ongoing assessment of children provides information to guide instructional decisions and is supported by NAEYC (2003) as a component of high-quality ECE.
4. Program administration and leadership: Program directors with more education and ECE training have been rated as providing higher classroom quality in multiple studies.
5. Staff compensation and benefits: Programs offering higher wages and benefits to their staff have been rated as providing higher classroom quality (some studies were unable to replicate these findings).

The literature further supports additional program components’ impact on program quality:

1. Training and professional development: Studies have identified the capacity of professional development to improve program quality (Egert et al, 2018).
2. Physical environment and material: While the physical environment and learning materials are closely related to the pedagogical approach of the teachers and the relationship between educator and children, Mashburn (2008) found that pre-K classrooms with higher-quality physical resources were not overall associated with children's development of academic, language, and literacy skills. However, the quality of physical environments, such as furnishings for care, play and learning, and room arrangements, had a stronger positive association with children's academic and literacy skills among children who experience social and economic risk factors.

The evolving research regarding the quality of child care and child outcomes identifies certain structural and process elements of care that enhance the quality of care and impact child outcomes. With the increase in the share of CCDF funds dedicated to initiatives that improve the quality of care (CCDBG Act, 2014), state agencies that administer the CCDF funds are implementing quality rating and improvement systems to educate parents seeking care about indicators of quality and provide evaluation, support, and incentives to child care providers to improve the quality of the care provided.

Relationship Between Costs and Quality of Early Childhood Care

There have been limited empirical studies on the association between quality and costs in ECE center-based programs. The existing body of research indicates that a positive relationship exists between cost and quality; higher-quality centers tend to have higher costs.⁶ However, the magnitude of

⁶ Source: Assessing the Implementation and Cost of High-Quality Early Care and Education: A Review of the Literature

the relationship ranged considerably across studies, likely due to the wide variation in approaches for measuring cost and quality.

The Cost, Quality, and Child Outcomes (CQO) study was a study of 401 child care centers in four states conducted in the mid-90s; the study found that on average, a 1-point difference in quality scores on a 7-point scale, as measured by the Environment Rating Scales (ERS), was associated with a 10 percent difference in a center's total variable costs (Helburn, 1995). Blau and Mocan (2002) reanalyzed CQO data and calculated a 6 percent difference in costs for a 1-unit difference in ERS scores. Glantz and Layzer (2000) used the CQO data to estimate the cost-quality relationship at the classroom level; their results suggest a \$5,000–\$10,000 difference in annual per-child costs between classrooms with ECERS or ITERS scores that differ by 1 rating point.

The Massachusetts Cost and Quality Study collected cost and quality data from 90 community-based centers serving preschoolers in Massachusetts (Marshall et al, 2001). The study compared centers of “less than good” quality (with ERS scores below 4.5) to centers of “good-minus to good-plus” quality (scores of 4.5 to 5.49) and centers with “better quality” (scores of 5.5 and above). The study found no significant difference in costs between the “less than good” centers and the “good-minus to good-plus” centers, but a statistically significant 27 percent cost difference between “less than good” and “better quality” centers.

A follow-up study of 102 community-based centers serving infants and 104 full-day, full-year community-based centers serving toddlers in Massachusetts revealed that costs were 13 percent higher in infant rooms with ITERS scores of at least 4 versus those with scores less than 4 while costs were 14 percent higher in toddler rooms with ITERS scores of at least 4 versus those with scores less than 4 (Marshall et al, 2004a). A similar study conducted using data from centers in Maine finds that centers that achieve at least “minimal” quality (ECERS scores of 3 and above) had costs that were 17 percent higher than centers that do not reach this benchmark (Marshall et al, 2004b).

Belfield and Schwartz (2007) explored the cost-quality relationship using data from 745 public and private preschool programs in the Abbott districts in New Jersey and estimated a statistically significant two percent difference in per-child costs associated with a 1-point difference on the ECERS-R. Levin and Schwartz (2007) used national data to examine the relationship between cost and quality at the state level and found that states that provided higher-quality preschool as measured by the state preschool quality rating scale of the National Institute for Early Education Research (NIEER) spent about seven percent more than average based on state-reported expenditures.

Investing in Quality

Mathematica conducted a review of the literature and research syntheses in the areas of ECE quality, implementation science, and costs in 2016 (Caronongan et al, 2016). The review found that the current measurement of the cost-to-quality relationship provided little direction for those who wished to invest in quality. Most studies examined total costs or broad categories of aggregate costs which limits understanding of how costs that are tied to ECE center functions could be reallocated to improve quality. *“The field needs more knowledge about what an ECE center needs to do to offer better quality.”*

A few studies have considered the financial costs of increasing structural measures of quality (Vandell & Wolfe, 2000). Powell and Cosgrove (1992) studied data from a survey of 265 child care

centers conducted by the U.S. General Accounting Office and found that decreasing the average child/staff ratio by one, for example from 11:1 to 10:1, would increase costs by 4.5 percent; increasing the average education of staff by one year would increase costs by 3.4 percent; increasing staff experience by one year would reduce costs by 0.6 percent; and, the departure of an additional 10 percent of the center's teaching staff increases costs by 6.8 percent. This study is limited as it relies on data that are more than 30 years old, only includes accredited centers, and only includes data for the care of 4- and 5-year-old children.

The U.S. Administration for Children and Families' Office of Child Care's Provider Cost of Quality Calculator (PCQC) is based on an assumption tested in more than a dozen states that Quality Cost Drivers tend to fall into three categories (U.S. Administration for Children and Families' Office of Child Care, 2015):

1. Staff qualifications: increased wages for staff with degrees will increase costs.
2. Ratios: reducing ratios reduces revenue (increases cost per child) since costs are spread among fewer children.
3. Time: increased staff time for staff meetings, paid planning time, child assessments, parent engagement, and transition activities will increase costs.

Incentivizing Investing in Quality

Cost modeling conducted by the Transforming the Early Childhood Workforce project in Colorado found that high-quality providers are less able to balance revenues and expenses than their low-quality peers. The greatest revenue gaps occur at quality levels 4 and 5, where lower child-staff ratios and higher teacher wages for more qualified staff result in lower revenues but greater expenses than at lower quality levels (Franko et al, 2017).

Cost modeling conducted by the Office of the State Superintendent (OSSE) in the District of Columbia also found that while the District's tiered reimbursement rates narrowed the gap between costs and available revenue, at each of the QRIS quality levels, the total expense increases at each designation level and the increases in subsidy revenue alone does not cover the gap (District of Columbia, Office of the State Superintendent, 2018).

Similarly, in Texas, the Fort Worth-Dallas Cost of Quality Study involved two counties (Tarrant and Dallas) and found that there was little or no financial incentive to move beyond operating at the Two-Star level (Mitchell, 2017). Initial costs to attain the Two-Star level, which is primarily comprised of structural measures, were covered at no cost to centers in Texas Rising Star. Quality at higher levels, though, requires stronger performance on process measures. These researchers concluded that while the CCS tiered rate in effect at the time appeared to support the Two-Star centers adequately, the Three-Star and Four-Star rates did not appear to support sustaining quality at Three-Star and Four-Star levels. Note that Texas reimbursement rates have been increased substantially since this study was conducted.

Quality Rating and Improvement Systems

In the late 1990s, states across the country began developing and implementing early childhood education (ECE) Quality Rating and Improvement Systems (QRIS) to support the improvement of quality by establishing “star ratings” systems (QRIS Resource Guide). These systems were designed to encourage quality initiatives by identifying programs along a continuum of quality and to help families identify quality care. QRISs share five common structural elements that support and promote quality: standards, a rating system parents can use in selecting care, a quality improvement process, financial incentives to assist with the purchase of equipment and materials as well as higher reimbursement rates for higher-quality programs, and parent education regarding quality ECE (Tout et al, 2010; Zellman & Perlman, 2008). QRIS is intended to act as a motivator to programs to improve quality in that educated parents will use the ratings to select care; programs receive assistance with quality improvements and an increased reimbursement rate for higher quality rated programs. In essence, QRIS intends to improve quality by affecting both the demand for high-quality care and the supply.

Texas Rising Star

Until 2021, the Texas QRIS, Texas Rising Star, was a voluntary quality-based rating system of child care providers participating in the Texas Workforce Commission’s subsidized child care program.⁷ The program intends to assist parents in understanding the level of the quality of care their family is receiving through a given program while assisting providers to improve the quality of care. Providers that achieve Texas Rising Star certification offer care that exceeds the State’s Minimum Child Care Licensing Standards. Effective January 2021, Texas Rising Star includes the following four categories:

1. Director and Staff Qualifications and Training,
2. Teacher-child Interactions,
3. Program Administration, and
4. Indoor/Outdoor Environments,

Texas Rising Star evaluates programs to assign a quality rating of Two- Three- or Four-Stars, with each level exceeding minimum standards and with Four-Stars representing the highest quality of care. Based on the data collected regarding a provider’s performance in the four Texas Rising Star areas, TWC awards the provider a Texas Rising Star rating while also providing support to continue to ensure and improve quality. As providers progress through the levels of Texas Rising Star certification they improve their programs’ capacity to contribute to the development of the children served.

In September 2017, TWC partnered with the Children’s Learning Institute (CLI) at The University of Texas Health Science Center at Houston to conduct The Strengthening Texas Rising Star Implementation Study. This study focused on three areas of Texas Rising Star implementation: (1) to evaluate the reliability and validity of the Texas Rising Star assessment system and make

⁷ In 2021, the Texas legislature enacted legislation that requires all providers in TWC’s Child Care Services subsidy program to participate in Texas Rising Star. TWC is currently implementing this new requirement through modifications to TWC’s administrative rules and will be moving toward a mandatory Texas Rising Star program for the Child Care Services program.

recommendations for improvement; (2) to develop a sustainable certification and training system for Texas Rising Star Assessors and mentors to ensure ratings are consistent across LWDA areas and assessors; and (3) to test delivery of mentoring protocols aligned with Texas Rising Star standards, enhancing Texas Rising Star’s Quality Improvement (QI) capabilities.

The Strengthening Texas Rising Star Implementation study assessed 128 providers, 61 of whom were Texas Rising Star certified, using Texas Rising Star assessment tools. The assessments were conducted by 14 rigorously trained assessors demonstrating “acceptable” to “excellent” inter-rater reliability. The study findings support several recommendations regarding assessment and documentation procedures intended to strengthen the accuracy of ratings and provide evidence to support the scoring of assessment items to provide clear guidance to providers and guide parents to further understand quality. Recommendations related to the improvement of the Texas Rising Star assessment tool include the retention and discarding of specific Texas Rising Star assessment items; revisions of certain assessment items, scoring criteria, assessment, and documentation procedures; and updates to the technical scoring manual. Further, the study recommends Texas Rising Star adjust the relative weight of categories to more accurately reflect the influence of evidence-based practices on children’s outcomes.

The Strengthening Texas Rising Star Implementation Study included the design and development of the Texas Rising Star Assessment Training and Certification Program designed to ensure all assessors are trained to a standard of reliability before data collection and include systems for monitoring reliability and preventing drift among assessors over time. The program includes online learning modules, practice assignments, and a tiered support approach for assessors who do not meet reliability criteria, including small group Professional Learning Communities and individualized feedback.

The present Cost of Quality Price Modeling Report (CQ-PMR) builds on this earlier work by exploring the incremental costs of providing quality child care in the State of Texas, relative to care that merely meets state licensing standards. It does this in part by modeling the prices charged for higher-quality care among certified Texas Rising Star and other nationally accredited providers, relative to prices charged by similar providers who are neither Texas Rising Star certified nor accredited. In addition to the overall cost of quality, this study attempts to determine the relative contributions to costs of individual structural components of quality, including staffing ratios and staff turnover; staff education and experience; staff training expenses; earnings and benefits; and curriculum, assessment and staff planning time. Both lines of inquiry will serve the greater goal of helping to ensure that quality child care in the Texas market is adequately reimbursed and that care providers are adequately incentivized to improve the quality of care they provide.

STUDY DESIGN

This discussion of the study design briefly describes the sampling of centers and homes, and the survey instruments used.

SAMPLE OF CHILD CARE FACILITIES

The study survey sample was drawn from a list of over 14,500 licensed and registered child care facilities provided by the Texas Health and Human Services Commission Child Care Regulation department (HHSC CCR) in September 2019. The list included three types of child care facilities:

1. Licensed Child Care Centers (LCCCs)
2. Licensed Child Care Homes (LCCHs)
3. Registered Child Care Homes (RCCHs)

Head Start facilities were removed from the list before sampling because they do not charge families directly, and thus they have no true market rates.

The initial sampling plan, which sought to reach around 1200 total respondents, was to dedicate the bulk of the statistical power in this research design to the Licensed Center portion of the study, and a lesser share to the Licensed and Registered Home portion. We emphasized centers in this design because 1) the vast bulk of child care subsidy funding in Texas is spent on care provided by Licensed Centers, and 2) recent literature reviews confirm that before now, no researchers have published studies attempting to determine the cost of quality care in home daycare settings.

Upon implementation of this plan, the numbers of facilities in some categories were smaller than expected, particularly among licensed and registered homes, but also among licensed centers that do not accept subsidies, as described below. In response to this reality, we selected all available accredited or certified facilities within some categories (a complete census), sampled enough comparison group (non-accredited, non-certified) facilities to balance the design, and then re-allocated the remaining resources to focus on licensed centers that accept subsidies.

At present, the Texas child care market is somewhat segmented around the acceptance of subsidies, with those facilities accepting subsidies charging somewhat less than those that do not. Among facilities that accept subsidies, the Texas Rising Star QRS is highly relevant since having a Texas Rising Star rating and having more stars both yield potentially higher reimbursement rates. Among those facilities that do not accept subsidies, there is little monetary incentive to encourage participation in Texas Rising Star, and thus any facility interested in using accreditation to signal its high-quality care to potential customers is more likely to seek accreditation through one of several national accrediting bodies (discussed below). It is important to study the cost of quality care in both contexts, as the experiences of both subsidized, mostly Texas Rising Star certified quality providers and non-subsidized but mostly nationally accredited quality providers will be able to inform the true cost differentials associated with quality care.

Licensed Centers

Two independent samples of licensed centers were randomly chosen, with one including centers that accept subsidies, and another including centers that do not accept subsidies. For purposes of identifying these samples, acceptance of subsidies was defined as having served one or more subsidized children within approximately six months of the sample selection date and having one or more rates listed in the approved rate database around the time of the sample selection. Each of these independent samples consists of equal numbers of certified or accredited and non-certified and non-accredited facilities.

For purposes of defining the higher quality samples, we used TWC administrative records to identify Two-, Three-, and Four-Star Texas Rising Star certified facilities effective around the time of the sample date. We further identified nationally accredited facilities by matching against lists of accredited facilities received from those accrediting organizations whose imprimatur was at the time automatically accepted by the Texas Rising Star system as evidence of Four-Star rated quality.⁸ According to Texas Rising Star guidelines in effect at that time, “child care facilities not operated by the Department of Defense (DoD), but with a DoD-recognized national accreditation, receive initial Four-Star certification without requiring a full on-site assessment.”

These accrediting bodies include:

- National Association for the Education of Young Children (NAEYC)
- National Association for Family Child Care (NAFCC; for home-based providers)
- National Early Childhood Program Accreditation (NECPA)
- National Accreditation Commission for Early Child Care and Education (NAC)
- Council of Accreditation (COA)
- Cognia (formerly AdvancED Quality Early Learning Standards, QELS)

In addition to these DoD-recognized bodies, the accreditation decisions of the Association of Christian Schools International (ACSI) were also accepted by Texas Rising Star for initial Four-Star certification of Licensed Centers. As such, facilities accredited by ACSI were also included in our quality sample.⁹

Turning first to the 5032 centers that were identified as accepting subsidies, we found an overall rate of higher quality designation of 12.6 percent. When looking at their quality status in terms of Texas Rising Star status, national accreditation, or both, we found only 253 centers with national accreditation, with the bulk of these also being Texas Rising Star centers (see Table 2). We sampled all nationally accredited centers in this group (samples listed in bold in Table 2). The most frequent quality signifier among centers accepting subsidies was Texas Rising Star certification. We randomly

⁸ Note that for this purpose we did not rely on the self-reported accreditation or TRS certification questions that are a routine part of the Market Rate Survey.

⁹ Under current policy as of early 2022, in lieu of automatic Four-Star certification, nationally accredited providers now receive a modified initial assessment for Texas Rising Star. See <https://texasrisingstar.org/providers/eligibility/>

sampled 380 Texas Rising Star-only facilities. Finally, following a geographic stratification scheme illustrated below, we randomly selected 633 non-accredited, non-certified facilities to form the comparison group.

Table 2. Sampling Licensed Centers that Accept Subsidies

	Universe	Sample
Total Accredited / Certified:	1,377	633
Texas Rising Star only:	1,124	380
Both:	218	218
Nationally Accredited only:	35	35
Total Non-Accredited / Non-Certified	3,655	633

Before sampling the comparison group, all subsidized Licensed Centers were stratified geographically based on whether they are located in a county classified as metropolitan, micropolitan, or rural. Further stratification was done within the metropolitan category such that each major metropolitan area of the state constitutes its own stratum. The results of this stratification are shown in Table 3.

Table 3. Geographic Distribution of Centers that do Not Accept Subsidies

Geographic Stratum	Accredited / Certified	Non-Accredited / Non-Certified
Austin	67	67
Dallas	97	97
El Paso	25	25
Ft Worth	67	67
Houston	139	139
McAllen	15	15
San Antonio	44	44
Other Metro	128	128
Micropolitan	29	29
Rural	22	22

Turning next to the 3,764 centers that were identified as not accepting subsidies, we found fewer centers with a higher quality designation overall, at 6 percent, and as expected a stronger tendency toward national accreditation (see Table 4). Since their numbers among centers not accepting subsidies were smaller than we had hoped, we selected all 228 accredited or certified facilities for our sample (listed in bold in Table 4). Finally, using the same geographic stratification, we randomly selected 228 non-accredited / non-certified facilities to serve as the comparison group.

Table 4. Sampling Licensed Centers that do Not Accept Subsidies

	Universe	Sample
Total Accredited / Certified:	228	228
Texas Rising Star only:	54	54
Both:	9	9
Nationally Accredited only:	165	165
Total Non-Accredited / Non-Certified	3,536	228

Licensed and Registered Homes

Among Licensed and Registered Homes, two independent random samples were drawn, one representing subsidized and the other non-subsidized homes. Unfortunately, the match against national accreditation databases yielded no accredited homes, mostly due to sparse identifying information included in the NAFCC database for matching.

Among the 904 homes identified as accepting subsidies, 95 facilities or 10.5 percent were determined to be Texas Rising Star certified homes. All were selected for the sample (see Table 5). Among the 3916 homes identified as not accepting subsidies, 37 or less than 1 percent were found to be Texas Rising Star certified; all were selected for the sample. Similarly sized samples of non-certified homes were randomly selected to serve as a comparison group, again using geographic stratification to ensure comparability to the group of certified homes.

Table 5. Sampling Homes

	Accept Subsidies		No Subsidies	
	Universe	Sample	Universe	Sample
Texas Rising Star Certified	95	95	37	37
Non-Certified	904	95	3,916	37

Both Licensed and Registered Homes were sampled in proportion to their respective shares of the population, but the Licensed/Registered dimension was not included in the stratification scheme for homes.

SURVEYS

The Cost of Quality Survey (CQS) instruments for home-based and center-based facilities covered similar topics (see Appendix B for full survey instruments). The major difference was that in gathering rates, homes provided detailed information concerning each child under their care (age, the exact schedule of care, and the rate charged), whereas centers provided rates by age group and by whether care was full-day or part-day (less than six hours per day). See Table 6 for a summary of information collected on home-based and center-based surveys.

Table 6. Summary of Survey Data Collected by Facility Type

Topics	Home-Based Survey	Center-Based Survey
Hours of Operation	Yes	Yes
Vacation Schedules	Yes	Yes
Child Age and Enrollment	Individual age and schedule for each child in care	*Facility-determined age groups and enrollment by age group
Rates	Rate Type (CCS/Non-CCS) and individual rate charged per child	Full-day and part-day rates by age group
Additional Fees		
Registration	Yes	Yes
Enrollment		
Activity		
Administrative Categories		
Non-profit/For-profit	Yes	Yes
Associations		
Transportation		
National Accreditations	Yes	Yes
Texas Rising Star Program	Yes	Yes
Staffing		
Qualifications/Experience	Yes	Yes
Pay Rates/Benefits		
Training		
Curriculum	Yes	Yes
Assessment	Yes	Yes
Planning Time and Nutrition	Yes	Yes

*Center rate data were gathered for children in various age groups, using the facility-determined age group cutoffs to set rates. For some of the analyses, these data were then collapsed into the following standard age groups for reporting: Infants (0-17 months); toddlers (18-35 months); preschoolers (36-71 months); and school-age children (72 months and over).

The CQS also included a set of questions designed to estimate ratios and group sizes for each age group served. These questions asked, for each age group, the total number of classrooms serving that age group, the number of children per classroom, and teachers per classroom.

SURVEY ADMINISTRATION

In addition to the data elements to be used in estimating the cost of providing quality child care, the present survey also gathered child care pricing data from responding facilities, to be used as the dependent variables in pricing models. For any facilities that happen to be included in both samples, the research team decided to administer the two surveys jointly, such that respondents to the CQS first answer the MRS survey, followed by the items specific to the CQS. The only exception to this ordering of survey items was for the ratio questions, which were found to be much easier to administer

when presented in the context of the section on child age and enrollment, where they provided details about each age group that a center reported serving.

DATA COLLECTION

Detailed training and supervision were provided to research staff members on survey methodology, interviewing protocols, data entry and collection, and tracking procedures by advanced graduate students and the project manager.

Before interviewing began, the research team mailed introductory letters and/or sent emails to all facilities in the sample explaining the survey purpose, goals and objectives, confidentiality policies, and the voluntary nature of participation. Information was presented in both English and Spanish unless providers' surnames suggested they were of Vietnamese origin, in which case information was presented in both English and Vietnamese. A website was also constructed to present further information about the survey to providers.

Data collection began in March 2020 and continued through July 2020. Initially, a seven-station call center at TXICFW operated Monday through Friday between 7:00 AM and 7:00 PM. After the COVID-19 pandemic became widespread, interviewers were provided with equipment to make the calls from their homes. Research staff members maintained a tracking database containing basic provider information (facility name, LWDA, phone number, facility identification number) and call history (number of attempts, date and time of the attempt, preferred calling times, appointments, call results, final status). A minimum of two morning calls and two afternoon or evening calls were made to contact each provider. The research staff administered calls at least one week apart unless an appointment or preferred calling time was established with a provider. In these cases, the staff made up to three additional attempts to complete the survey. A toll-free number was also available for providers to return missed calls, return a message, or ask further questions about the survey.

If research staff were unable to complete the survey after all attempts had been made to reach a provider, the facility was marked as 'over dialed' and no more attempts to contact that facility were made. In cases where the phone number provided was disconnected or no longer in service, the research staff attempted to contact the facility three times at least one week apart. If the number was still not working and no additional information was available online, the staff determined the facility to be ineligible.

During the interview, research staff members screened out facilities that did not represent the true market price of child care in Texas. These facilities include those that only offered drop-in care, part-day care with no after-school care, summer camps, care provided to specific populations only (i.e. children with special needs, children of teen moms, children of staff at a company, etc.), and free/family-discounted child care services. School and kindergarten programs that did not offer regular after-school care and Head Start programs were also excluded. Finally, facilities that had closed or no longer had children enrolled were determined to be ineligible.

SURVEY PARTICIPATION

The Cost of Quality Survey (CQS) was fielded in the early weeks of what eventually came to be recognized as a worldwide coronavirus pandemic that caused widespread disruptions to the economy

that were felt particularly acutely among workers with young children and those who care for young children. The disruptions to the child care market due to COVID-19 are still being felt, and their eventual effects on the nature of child care going forward have yet to fully take shape. The best we can do here is report what we found from those who responded while trying to correct for any biases that were introduced by the pandemic itself. There is, however, no escaping the fact that this report is now largely about the cost of quality child care *during a pandemic*.

A detailed description of the eligibility of providers sampled and response rates to the survey is included in the report for the 2020 Texas Market Rate Survey (MRS), which was fielded together with this CQS for those facilities that were in both samples. Nine percent of sampled facilities were determined not to meet study eligibility criteria for the MRS and were also omitted from further study in this report. For centers, the top reasons for not meeting eligibility criteria included: 1) they did not offer full, part day, or after-school care at least five days a week; 2) they were closed due to COVID-19; or, 3) they only served a specific population, and were not open to the public.

The CQS center survey received 829 complete responses in total, and the CQS home survey received 109 complete responses.¹⁰ The overall response rate when considering only eligible providers was 44.7 percent for homes and 53 percent for centers. Both overall response rates are a bit lower than seen in prior years of the MRS, but not surprising given the survey was fielded in the early months of a pandemic. The tendency for homes to have lower response rates than centers reflects prior years' experience as well.

Several findings are notable when looking at factors related to whether centers responded to the CQS. First, higher-quality centers were eight percentage points more likely to respond, relative to the non-Texas Rising Star / non-accredited comparison group. Most of this difference was due to Texas Rising Star, rather than national accreditation. In addition, centers that were confirmed to have served subsidized children in the months before the sample was drawn were also 13 percentage points more likely to respond. This greater response among subsidized facilities is not an unusual finding in the history of the market rate survey, but the pattern is stronger than usual.

The Pandemic

A third major factor influencing response tendency was not evident until linkages were made between each sampled facility and coronavirus case growth rates in their county during the exact weeks we tried to call them. Daily confirmed COVID-19 case counts at the county level were accessed from the Texas Department of State Health Services (DSHS), the analysis of which is described in detail in the Appendix and summarized here. Briefly, after cleaning the COVID-19 case count data, expressing it in per capita terms, and computing various lags, we determined that local confirmed COVID-19 case count growth rates around 8 to 14 days before we made the last call to a facility were most strongly predictive of whether that facility responded to the survey. Among centers, over 62 percent of eligible facilities completed the survey when their county COVID-19 case growth rate was low or moderate, but

¹⁰ See Appendix A section Characteristics of Respondents' Counties to get a sense of context on areas are served by the different quality tiers of providers who responded.

this fell to 34 percent when local COVID-19 case growth rates were high. The homes survey was unfortunately fielded during an objectively worse period of the pandemic when COVID-19 case rates were surging in Texas. Over 70 percent of eligible homes responded to the survey when county COVID-19 case growth rates were moderate, but this fell to 39 percent and 21 percent when local growth rates were high or very high. (See Appendix A for analysis details)

TWC Response

During the initial pandemic outbreak, child care was identified as an essential industry and exempted from mandatory state lockdowns. TWC began to implement supports to stabilize the segment of the Texas child care industry contracted to provide subsidized care in early March 2020. Temporary supports to providers of subsidized care and families receiving subsidized care included:

1. Providers continued to receive reimbursement when subsidized children were absent, or the provider temporarily closed their doors.
2. Enrollment eligibility redetermination for subsidized care was suspended.
3. The definition of children needing protective care was expanded to include children of essential workers.
4. A statewide eligibility threshold for subsidized care was implemented at 150% of the state median income.
5. Parents were allowed to self-attest that they are essential workers. All enrolled children of essential workers received three months of subsidized care.
6. For several months, parents' share of the cost was waived, allowing TWC to reimburse providers 100 percent of the cost of care even while children were absent.
7. Termination for excessive absences was waived, allowing children to remain eligible, and allowing providers to continue to be paid, past the prior 40-day absence policy.

In addition, millions in federal funding dollars marked for child care allowed Boards to issue supplemental payments to all subsidized care providers that remained open during the pandemic. The supplemental payment authorized providers to receive an additional 25 percent over their regular reimbursements. Further, stabilization grants became available for closed providers (homes or centers) participating in the subsidy program.

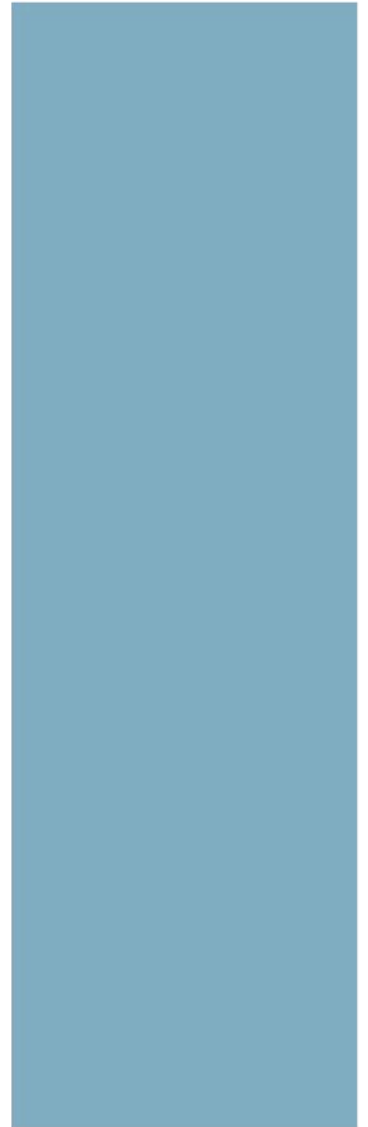
Child Care Market Turmoil

Texas HHSC Child Care Regulation (CCR) data provide additional evidence that the child care market was undergoing drastic changes due to the pandemic while the survey was in progress. When the sample was drawn in September 2019 there were over 14,500 centers and licensed and registered homes in the statewide CCR registry. At times over the Spring and Summer of 2020 the number of registered facilities, according to spot-checks with the registry, dropped to as low as 9500, in May 2000. By September 2000, the number of registered facilities was back around 11,500; by May 2021, the number registered was over 12,900; and by January 2022, the number registered was over 13,200, or about 92 percent of the number registered as of the initial sample. Interestingly, the bulk of registration losses occurred among registered homes, whose numbers declined by 19.9 percent, whereas the

numbers of licensed centers and licensed homes declined by 2.8 percent and 4.7 percent, respectively. It is difficult to say at present whether these apparent losses represent permanently closed facilities.

Analyses that were conducted in July 2020, at the conclusion of the initial survey and near the peak of the second coronavirus wave in Texas, indicated that both Texas Rising Star facilities and those that serve subsidized children were much more likely to still be listed in the CCR data. This pattern of findings for Texas Rising Star facilities and those who serve subsidized children suggests that by that point in the pandemic, providing care for subsidized children had been strongly protective of facilities' ability to continue to care for children. This suggested a need for a follow-up survey among centers.

A brief follow-up survey that targeted only the sampled centers from the original 2020 CQS was fielded simultaneously with the 2021 MRS, roughly one year after the 2020 initial wave of the CQS was fielded. The initial intent of this follow-up survey was to get updated pricing guidance on Texas Rising Star certified centers during a period when the effects of the pandemic on the Texas child care industry were expected to be waning. Unfortunately, the pandemic did not cooperate with this plan, and thus the updated pricing guidance is probably best regarded as informing the status of the late-pandemic child care industry. Follow-up survey results are presented later, after detailed findings from the initial survey wave.



Analysis & Calculators

ANALYSIS

As noted before, the biggest limitation of our empirical approach to estimating the cost of providing quality child care is that we are not able to provide estimates for any factor that does not pan out statistically in relation to daily rates. In light of this limitation, most of the price calculators reported below present clear findings that meet our standards as useful estimators of the price of providing quality child care. That is, the statistical model(s) behind a calculator is good enough, in terms of its ability to explain significant variation in child care rates charged around the state, that the price estimates derived from them can be trusted to provide accurate pricing guidance to providers and program administrators. A handful of calculators in this report isolate and illustrate important policy findings, but for reasons we will discuss, may not provide unbiased pricing guidance. These highlight areas where future research is needed, but may also challenge the conventional wisdom of how quality care is implemented. We present both types of calculators here, in the interest of advancing knowledge about the dynamics of quality care, but will be clear which ones might give misleading price guidance.

This analysis and calculators section is divided into two parts: one for centers, and another for licensed and registered child care homes. Both sections provide useful estimates and insights gleaned from the response data, however, there is a substantial difference in the volume of data behind the analyses, with the center analysis being based on almost eight times as many survey responses. As such, the reader can have far greater confidence in the center findings, but there are interesting results to share for homes as well. Generally speaking, three kinds of questions are asked in this section:

1. How much do child care facilities typically charge for care at each quality tier (including non-accredited or non-certified) for any combination of age group and local factors?
2. Which quality factors, of the ones we measured, are actually utilized by facilities at higher tiers, and to what extent? Examples include staffing ratios and staff turnover; staff education and experience; staff training expenses; earnings and benefits; and curriculum, assessment, and staff planning time.
3. How much is typically charged at varying levels of the quality factors we measured?

All three forms of questions are customizable to produce different answers for different age groups, and where possible, estimates can be customized for different areas as well. Questions of the first type are discussed for centers in the next section.

LICENSED CHILD CARE CENTERS

Analysis of the cost of quality among licensed child care centers is based on responses from 829 centers, which included a total of 5203 rate observations. Processing of the data in preparation for the analyses reported here, including adjustments made to correct for non-response bias and ensure facilities met minimum licensing standards, are described in Appendix A.

Due to the low incidence of accredited or certified facilities in Texas, an over-sample of higher quality facilities was necessary to gain enough statistical power to estimate the overall price of providing care at various quality tiers. The first price calculators reported here include those designed to estimate the price of providing higher quality care, relative to the pricing of 'baseline' care that simply meets state standards.

Accreditation

The first calculator looks at the incremental price of providing accredited child care¹¹, beyond the price of providing care that meets state licensing standards, for any chosen combination of geographical area, age group, and time interval.

Calculator 1 can be accessed by double-clicking, which activates an embedded Excel spreadsheet (clicking elsewhere in this document will close the spreadsheet). This and other calculators may work best if you avoid scrolling the document while it is open, so it may be preferable to have the calculator fully on-screen before opening.

Monthly, weekly, or daily pricing for accredited care can be estimated for different age groups, and for the entire state of Texas or one of the various metropolitan areas or non-metro areas of the state, by selecting the teal-colored drop-down boxes. The calculator also estimates the incremental pricing of accreditation in terms of the percent of the baseline daily price of care among non-accredited facilities it represents.

While some consider school-age children to be outside the definition of early childhood education, the rates charged for school-age care can influence the rates charged for younger children, as evidence presented in subsequent sections (especially Calculator 14) will show. Thus, we have chosen to include estimates for school-age children in calculators where appropriate to the circumstances. Importantly, however, this calculator and others in this report that estimate the pricing of school-age care present *afterschool* or part-day rates for this age group, whereas rates presented for all other age groups are full-day rates. This is done both to maximize the usefulness of the information, since after-school care is far more common than full-day care for school-age children, and to capitalize on categories of care in which the sample size is large enough to make precise estimates.

Calculator 1 shows that accredited child care is estimated to be priced around 16 to 20 percent more than non-accredited care in the most expensive urbanized areas of the state, and closer to 25 percent for school-age children. In less populous areas, the premium for accreditation is higher, typically 20 to 22 percent for younger children, and around 35 percent or more for school-age children.

¹¹ Note that, as described in the glossary, accredited may also include Texas Rising Star Certified facilities, whereas the non-accredited comparison group includes providers who are neither accredited nor Texas Rising Star Certified.

Calculator 1. Center Accreditation by Area and Age

Centers: Accreditation Price Calculator based on Area and Age

The following calculator allows you to estimate the baseline price of childcare by accreditation status based on your area and age group.

Please make the following selections to determine your baseline price.

Step 1: Please select an area
State of TX

Step 2: Please select an age group
Toddler (full day)

Step 3: Please select an interval
Weekly

Estimating prices for full day care

<i>Toddler age group in the State of TX area</i>	<i>Baseline weekly price</i>	<i>Percent Premium for Accreditation</i>
<i>Non-Accredited</i>	\$177 per week	
<i>Accredited</i>	\$220 per week	24.5%

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

Calculators can also be designed or customized to more specific applications. Calculator 2 displays the same results as Calculator 1, except it allows all age groups to be visualized at the same time.

Centers: Accreditation Price Calculator based on Area, all Ages

The following calculator allows you to estimate the baseline price of childcare by accreditation status and age group based on your area.

Please make the following selections to determine your baseline price.

Double Click to Activate

Step 1: Please select an area

State of TX

Step 2: Please select an interval

Daily

State of TX area		Baseline daily price	Percent Premium for Accreditation
Infant, full day	<i>Non-Accredited</i>	\$39.80 per day	
	<i>Accredited</i>	\$48.80 per day	23.0%
Toddler, full day	<i>Non-Accredited</i>	\$35.40 per day	
	<i>Accredited</i>	\$44.00 per day	24.5%
Preschool, full day	<i>Non-Accredited</i>	\$31.80 per day	
	<i>Accredited</i>	\$40.20 per day	25.9%
School age, afterschool	<i>Non-Accredited</i>	\$16.40 per day	
	<i>Accredited</i>	\$22.60 per day	36.8%

Source: RMC statistical analysis of the cost of quality data.

The possibilities for different ways to display the estimated incremental price cost of accreditation are endless, limited only by the imaginations of the authors, policymakers, stakeholders, and the questions they might ask. One might, for example, want to estimate the marginal price of quality for a given area with a given mix of age groups. Such a calculator would be straightforward to produce.

Whereas the first two calculators provide estimates for geographic areas of the state as divided into metropolitan areas, as well as less populated areas, that seem to best represent natural variation in

child care costs, there is also interest in knowing how much accredited care might cost in other areas defined by different geographic units. To address this possibility, we developed an extensive statistical model (see Appendix A) based on detailed local data from a wide variety of sources to estimate pricing for accredited and non-accredited care at the county level. Calculator 3 presents the results of this estimation.

Calculator 3. Center Accreditation by County and Age

Centers: Accreditation Price Calculator based on County and Age

The following calculator allows you to estimate the baseline price of childcare by accreditation status based on your county and age group.

Please make the following selections to determine your baseline price.

Step 1: Please select your county
Travis

Step 2: Please select an age group
Infant (full day)

Step 3: Please select an interval
Daily

Estimating prices for full day care

<i>Infant age group in Travis County</i>	<i>Baseline daily price</i>	<i>Percent Premium for Accreditation</i>
<i>Non-Accredited</i>	\$48.80 per day	
<i>Accredited</i>	\$55.80 per day	14.3%

Double Click to Activate

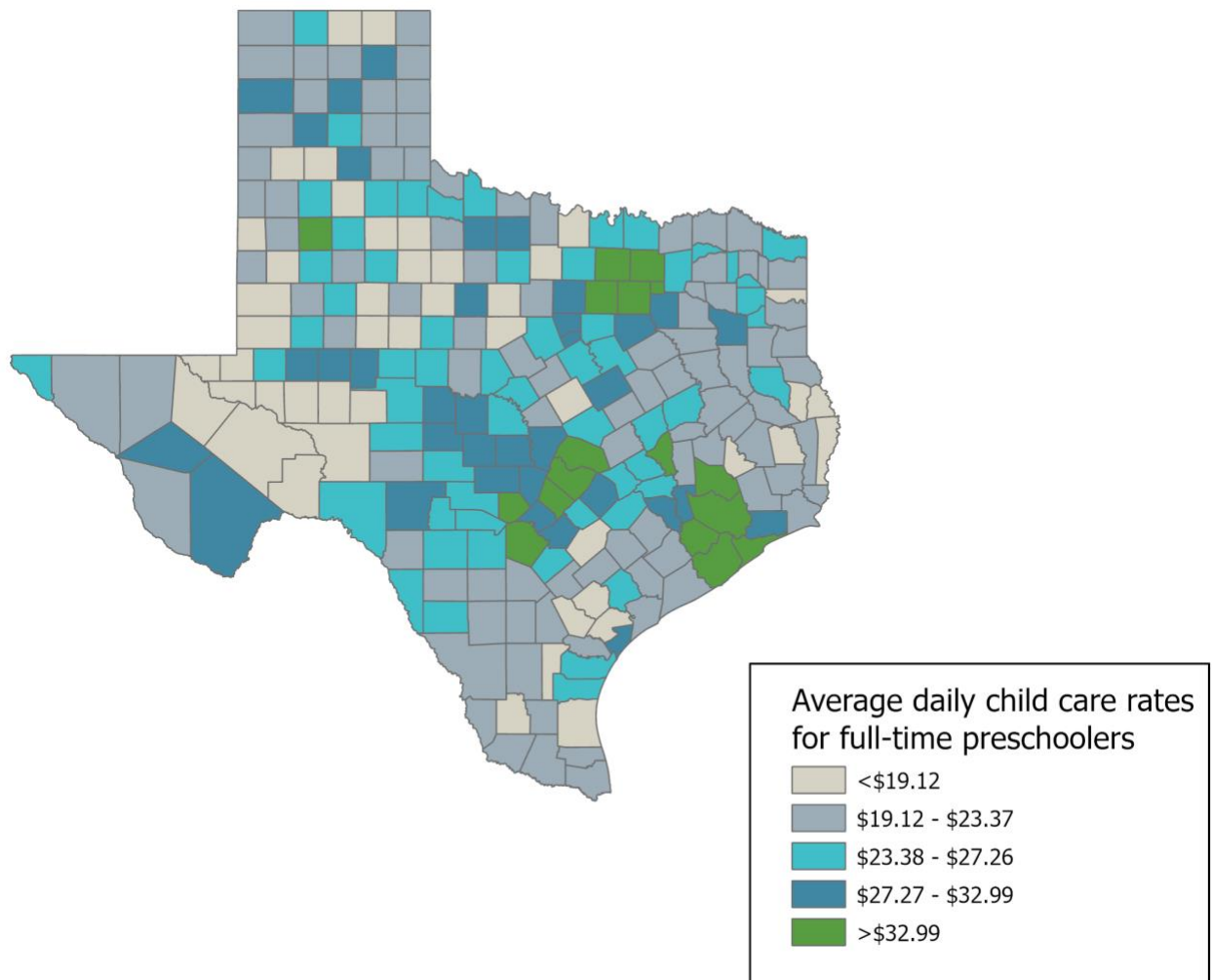
Source: RMC statistical analysis of the cost of quality data coupled with statistical modeling of publicly available data. Estimates based on the county are statistical approximations and do not imply that accredited or any child care is available in any listed county.

Calculator 3 can be utilized to show how pricing of care is concentrated and distributed within the larger areas on which most market-based pricing is currently gauged, such as local workforce development areas (LWDAs). For example, Harris County contains the urban core of the Houston area, but market rates for child care are typically reported for the entire Gulf Coast workforce development area, which is the largest in the state (by population) and encompasses 13 counties. But child care pricing is not homogenous within this area. Accredited care for full-day preschoolers is estimated to cost \$199 per week in Harris County, for example. In contrast, just one county to the west in Waller County, accredited care for preschoolers is estimated to cost almost 20 percent less, at \$161 per week.

And in the heavily suburban Fort Bend County, immediately southwest of Harris County, accredited care for preschoolers is estimated to cost 10 percent more, at \$220 per week.

Estimated county-level variation in child care rates may be easier to visualize using a map like that in Figure 1. A quick visual survey of this figure shows all the major metropolitan areas of the state are estimated to have among the most expensive care in the state, as shown on the map in green. And for the most part, the least populated areas of the state are estimated to have the least expensive care, as shown on the map in beige and gray.

Figure 1. Estimated Full-Time Preschooler Rates by County



Source: RMC statistical analysis of the cost of quality data coupled with statistical modeling of publicly available data. Estimates based on the county are statistical approximations and do not imply that accredited or any child care is available in any county.

The county-based estimates that underlie Calculator 3 and the map in Figure 1 can also be aggregated to create summaries using other geographical schemes. Calculator 4 presents the estimated pricing of providing accredited vs non-accredited care by Local Workforce Development Area (LWDA).

Calculator 4. Center Accreditation by Local Workforce Area and Age

Centers: Accreditation Price Calculator based on Local Workforce Area and Age

The following calculator allows you to estimate the baseline price of childcare by accreditation status based on your local workforce area and age group.

Please make the following selections to determine your baseline price.

Step 1: Please select your local workforce area
22 Coastal Bend

Step 2: Please select an age group
Infant (full day)

Step 3: Please select an interval
Daily

Estimating prices for full day care.

<i>Infant age group in local workforce area 22 Coastal Bend</i>	<i>Baseline daily price</i>	<i>Percent Premium for Accreditation</i>
<i>Non-Accredited</i>	\$31.00 per day	
<i>Accredited</i>	\$36.60 per day	18.1%

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data coupled with statistical modeling of publicly available data. Estimates based on local workforce area are statistical approximations and do not imply that accredited or any child care is widely available in any listed area.

Although LWDAs are commonly seen in the reporting of Texas child care market rates, the total population sizes and the amount of child care available in the counties that comprise each LWDA vary widely, with the result being for some areas, rates are estimated with far greater precision than others. To state this differently, in some areas the estimates are based more on actual rate data, whereas in other areas the estimates lean more heavily on modeling. Both Calculator 3 and Calculator 4 give a warning when displaying estimates based on very little data; these estimates should be interpreted with caution. On the other hand, the accuracy of these estimates can be improved by incorporating more extensive rate data, such as that collected by the annual Market Rate Survey.

Texas Rising Star

Estimating the cost of providing care at varying levels of Texas Rising Star certification¹² requires a modified approach compared to that for accreditation. First, because Texas Rising Star levels primarily affect reimbursement rates of providers who serve subsidized children, the analysis and calculators in this section only apply to those centers that accept subsidies. Second, because of the very small numbers of Two- and Three-Star facilities, relative to the number of Four-Star facilities, and statistical oddities about the way they are distributed geographically, it was necessary to collapse them into one category for this analysis. Even so, as shown in Calculator 5, the results make quite clear that the incremental price of care at the Two- or Three-Star level is a small fraction of the additional price of care at the Four-Star level.

Texas Rising Star certified care at the Two- or Three- star level is priced around 5 to 7 percent more on a statewide basis, as compared to non-certified care.¹³ On the other hand, Texas Rising Star certified care at the Four-Star level is priced 20 to 30 percent more than non-certified care, depending on the age group.

Calculator 5 also presents estimated pricing for Texas Rising Star certified care in various major metropolitan areas of the state, or for Micropolitan or rural areas of the state, geographic divisions that represent natural variation and require no approximations. As seen elsewhere, child care is far more expensive in major metropolitan areas and least expensive in micropolitan or rural areas. Although we have no evidence that the pricing of Texas Rising Star certification varies geographically, when the model estimates are computed as a percentage of non-certified rates, the pricing associated with certification is typically a smaller percentage in areas with more expensive care.

¹² Note that certified facilities may or may not be accredited, and accredited facilities may or may not be certified, although some organizations' accreditation can lead to automatic 4-Star certification upon request.

¹³ Note that the "non-certified" comparison group is distinct from the "non-accredited" comparison group above; although there is overlap, the non-certified group is restricted to centers that accept subsidies.

Calculator 5. Center Texas Rising Star by Area and Age

Centers: Texas Rising Star Certification Price Calculator based on Area and Age

The following calculator allows you to estimate the baseline price of childcare by Texas Rising Star (TRS) certification level based on your area and age group.

Please make the following selections to determine your baseline price.

Step 1. Please select an area
Austin

Step 2: Please select an age group
Infant (full day)

Step 3: Please select an interval
Monthly

Estimating prices for full day care

<i>Infant (full day) age group in the Austin area</i>	<i>Baseline monthly price</i>	<i>Percent Premium for TRS Certification</i>
<i>Non-certified centers</i>	\$946 per month	
<i>TRS 2 or 3 Star centers</i>	\$998 per month	5.5%
<i>TRS 4 Star centers</i>	\$1102 per month	16.4%

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

As with national accreditation, there is also interest in knowing how much Texas Rising Star certified care might cost in other areas defined by different geographic units. Once again, we developed a statistical model based on detailed local data from a wide variety of sources to estimate pricing for Texas Rising Star certified and non-certified care at the county level. This model is distinct from the one used in the accreditation section above (see details in Appendix A). Calculator 6 below, like Calculator 3 did for national accreditation, estimates pricing for care provided at varying levels of Texas Rising Star at the county level rather than the metropolitan area.

Calculator 6. Center Texas Rising Star by County and Age

Centers: Texas Rising Star Certification Price Calculator based on County and Age

The following calculator allows you to estimate the baseline price of childcare by Texas Rising Star (TRS) certification level based on your county and age group.

Please make the following selections to determine your baseline price.

Double Click to Activate

Step 1. Please select your county

Fort Bend

Step 2: Please select an age group

Infant (full day)

Step 3: Please select an interval

Monthly

Estimating prices for full day care

<i>Infant age group in Fort Bend County</i>	<i>Baseline monthly price</i>	<i>Percent Premium for TRS Certification</i>
<i>Non-certified centers</i>	\$955 per month	
<i>TRS 2 or 3 Star centers</i>	\$987 per month	3.4%
<i>TRS 4 Star centers</i>	\$1098 per month	15.0%

Source: RMC statistical analysis of the cost of quality data coupled with statistical modeling of publicly available data. Estimates based on the county are statistical approximations and do not imply that accredited or any child care is available in any listed county.

Calculator 7 presents similar estimates to those in Calculator 6, except they have been aggregated to the local workforce area. As before, both Calculator 6 and Calculator 7 provide warnings to the user when displaying estimates for areas with few survey respondents, an indication that they are based more on modeling and less on rate data.

Calculator 7. Center Texas Rising Star by Local Workforce Area and Age

Centers: Texas Rising Star Certification Price Calculator based on Local Workforce Area and Age

The following calculator allows you to estimate the baseline price of childcare by Texas Rising Star (TRS) certification level based on your local workforce area and age group.

Please make the following selections to determine your baseline price.

Step 1. Please select your local workforce area
 14 Capital Area

Step 2: Please select an age group
 Infant (full day)

Step 3: Please select an interval
 Monthly

Estimating prices for full day care

<i>Infant age group in local workforce area</i>	<i>Baseline monthly price</i>	<i>Percent Premium for TRS Certification</i>
<i>14 Capital Area</i>		
<i>Non-certified centers</i>	\$988 per month	
<i>TRS 2 or 3 Star centers</i>	\$1021 per month	3.3%
<i>TRS 4 Star centers</i>	\$1133 per month	14.7%

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data coupled with statistical modeling of publicly available data. Estimates based on local workforce area are statistical approximations and do not imply that accredited or any child care is widely available in any listed area.

Program Elements

This section attempts to provide context for the analysis of the pricing of quality program components by first describing basic features of accredited and Texas Rising Star certified child care centers, and second by looking at external support factors that could impact pricing but are theoretically independent of quality.¹⁴

¹⁴ Centers identified as accredited or non-accredited both include TRS certified and non-TRS certified centers.

Elements of Program Structure

Basic elements of the ECE program structure are discussed here, including the age ranges of children served and the existence of waitlists for each age range. Child care can be difficult to find, particularly for those parents with infants, and to a lesser extent, toddlers. Thus, the existence of child care programs with waitlists for care indicates categories of care in which demand for care exceeds the supply available. Table 7 breaks down these features for accredited vs non-accredited centers, while Table 8 does so for Texas Rising Star certified vs non-certified centers (more detailed versions of these tables, including sample sizes and additional statistics, are included in Appendix A).

Examination of Table 7 indicates that while essentially all centers serve preschoolers, accredited centers are significantly more likely to serve the younger age ranges, including infants and toddlers. The waitlist data confirm the common observation that demand exceeds supply for the youngest children, as those seeking infant or toddler care are more likely to encounter a waitlist for such care. Further, accredited centers are more likely to report waitlists for child care, especially so for the youngest children, as compared to non-accredited centers. Notably, accredited centers are 24 percentage points more likely to report waitlists for infant care, compared to non-accredited centers, indicating that demand is particularly strong for high-quality infant care.

Table 7. Elements of Program Structure by Accreditation

	Non-Accredited	Accredited	Accreditation Difference	
Center serves infants	70.4%	84.2%	+13.8%	**
Center serves toddlers	78.7%	90.7%	+12.0%	**
Center serves preschoolers	99.1%	99.7%	+0.6%	
Center serves school age children	81.5%	77.2%	-4.3%	
Waitlist exists, full-time infants	34.4%	58.6%	+24.2%	**
Waitlist exists, full-time toddlers	23.5%	39.8%	+16.3%	**
Waitlist exists, full-time preschoolers	13.8%	21.9%	+8.1%	*
Waitlist exists, part-day school age	10.3%	13.5%	+3.2%	

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at $p < .01$; *= significant at $p < .05$

Table 8 identifies similar patterns of differences between non-certified and Texas Rising Star certified centers for age categories of children served. Both Two- or Three-Star and Four-Star certified centers are significantly more likely to serve infants and toddlers compared to non-certified centers. The differences in waitlists for infant, toddler, and preschool care are similar to that seen above but are statistically significant primarily for Four-Star centers. Four-Star certified centers are more likely to report waitlists for the care of infants, toddlers, and preschoolers. The waitlist findings presented in Table 7 and Table 8 support the supposition that parents are aware of and value accreditation and Four-Star certification as indications of child care quality.

Table 8. Elements of Program Structure by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Center serves infants	72.1%	83.1%	+11.0% **	87.8%	+15.7% **
Center serves toddlers	78.1%	91.0%	+12.9% **	94.7%	+16.6% **
Center serves preschoolers	99.2%	100.0%	+0.8%	99.9%	+0.7%
Center serves school-age children	85.4%	87.6%	+2.2%	85.1%	-0.3%
Waitlist exists, full-time infants	36.8%	45.3%	+8.5%	54.7%	+17.9% **
Waitlist exists, full-time toddlers	25.0%	29.7%	+4.7%	40.2%	+15.2% **
Waitlist exists, full-time preschoolers	13.3%	22.3%	+9.0% *	23.4%	+10.1% **
Waitlist exists, part-day school-age	12.6%	17.7%	+5.1%	15.7%	+3.1%

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at p<.01; *= significant at p<.05

Table 9 displays the Texas Rising Star Four-Star difference and the Accreditation differences from the prior two tables side-by-side for easy comparison of these two major quality ‘effects,’ relative to their respective comparison groups.

Table 9. Elements of Program Structure, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference	Accreditation Difference
Center serves infants	+15.7% **	+13.8% **
Center serves toddlers	+16.6% **	+12.0% **
Center serves preschoolers	+0.7%	+0.6%
Center serves school age children	-0.3%	-4.3%
Waitlist exists, full-time infants	+17.9% **	+24.2% **
Waitlist exists, full-time toddlers	+15.2% **	+16.3% **
Waitlist exists, full-time preschoolers	+10.1% **	+8.1% *
Waitlist exists, part-day school age	+3.1%	+3.2%

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at p<.01; *= significant at p<.05

External Supports

The goal of the price calculators in the next section is to estimate the pricing for structural components of quality care, relative to pricing associated with ‘baseline’ care that simply meets state

standards. But first, to improve the estimation of pricing for care, in this section, we look at some factors that may be related to prices charged but not necessarily related to quality. The hope here is that we can improve the accuracy of our final pricing of quality models by statistically accounting for these extraneous cost factors.

Direct external supports to a child care facility may consist of free or reduced-cost services, and financial or other donations the facility may receive. In addition, other more subtle forms of support could be observed through affiliations or associations between a child care facility and other organizations such as churches, schools, or other community organizations.

Financial support

These additional sources of income may reduce the cost borne by families directly paying for child care services, and therefore must be accounted for in estimating the pricing of quality care. The survey assessed 16 sources of such external supports, including 10 potential sources of donations and six free or reduced-cost services (see the first column of Table 10; see Appendix B, p. B-6, items 26 and 27, for the survey items).

Table 10 shows the percentages of accredited and non-accredited centers that reported receiving financial donations or reduced-cost services. By far the most common support reported is the Child and Adult Care Food Program (CACFP), a federal program that provides reimbursements for nutritious meals and snacks to eligible children who are enrolled for care at participating centers. Accredited centers are substantially less likely to receive this support, with just over a third of accredited centers participating in the CACFP program compared to about half of non-accredited centers.

Table 10. External Supports: Donations and Reduced Cost Services by Accreditation

	Non-Accredited	Accredited	Accreditation Difference	
Financial donations				
Federal Child Care Food Program	49.3%	35.8%	-13.5%	**
CCMS (other than subsidies)	0.3%	1.0%	+0.7%	
United Way	9.3%	1.4%	-7.9%	**
Religious institutions	0.0%	1.1%	+1.1%	*
Local, state or federal government funding	11.5%	5.4%	-6.1%	*
Private or individual donations	11.4%	7.3%	-4.1%	
YMCA / YWCA	0.2%	0.0%	-0.2%	
School district	0.5%	0.0%	-0.5%	
Foundations	7.5%	2.5%	-5.0%	*
Other	0.4%	1.9%	+1.5%	
Reduced cost services				
Building use	9.6%	3.4%	-6.2%	**
Utilities	7.3%	2.1%	-5.2%	*
Volunteer work	1.3%	3.3%	+2.0%	
Furniture or equipment	1.1%	2.2%	+1.1%	
Supplies	0.3%	2.0%	+1.7%	*
Other	1.9%	1.2%	-0.7%	

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Note that, except for the popular food program, the vast majority of centers do not receive the benefit of external supports. Less than 8 percent of accredited centers and less than 12 percent of non-accredited centers are reported to have received other financial donations or reduced-cost services. Although accredited and non-accredited centers report receiving external supports at similar rates for many items listed here, the table shows that in cases where significant differences exist it is typically the non-accredited centers that tend to receive more support. Centers without national accreditation are substantially more likely to receive financial support from the United Way, the government, and foundations; they are also more likely to receive reduced-cost rent or utilities. Accredited centers, meanwhile, have only a slight advantage in receipt of donations from religious institutions and reduced-cost supplies.

Turning now to Texas Rising Star certified centers and the non-certified comparison group in Table 11, we find even greater receipt of financial support from the CACFP food program, with 57 to 65 percent of centers in all categories receiving this support. As mentioned before, the “non-certified” comparison group in Table 11 is distinct from the “non-accredited” comparison group. Although there is overlap between the two comparison groups, the non-certified group is restricted to centers that accept subsidies. Thus, it appears centers that report accepting subsidies, whether Texas Rising Star certified or not, are more likely to participate in the food program.

Table 11. External Supports: Donations and Reduced Cost Services by Texas Rising Star Status

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Financial Donations					
Federal Child Care Food Program	56.9%	65.2%	+8.3%	58.2%	+1.3%
CCMS (other than subsidies)	0.4%	0.0%	-0.4%	2.0%	+1.6%
United Way	8.0%	3.1%	-4.9%	4.2%	-3.8%
Religious institutions	0.0%	0.0%	0%	1.7%	+1.7% *
Local, state or federal government funding	10.9%	13.6%	+2.7%	7.9%	-3.0%
Private or individual donations	11.1%	11.0%	-0.1%	10.1%	-1.0%
YMCA / YWCA	0.3%	0.0%	-0.3%	0.0%	-0.3%
School district	0.6%	0.0%	-0.6%	0.0%	-0.6%
Foundations	6.0%	5.4%	-0.6%	4.5%	-1.5%
Other	0.0%	3.5%	+3.5% **	0.6%	+0.6%
Reduced cost services					
Building use	7.6%	3.3%	-4.3%	4.8%	-2.8%
Utilities	5.2%	1.1%	-4.1%	2.1%	-3.1%
Volunteer work	1.1%	0.0%	-1.1%	2.4%	+1.3%
Furniture or equipment	1.4%	2.1%	+0.7%	2.6%	+1.2%
Supplies	0.4%	2.1%	+1.7%	2.6%	+2.2% *
Other	2.3%	0.0%	-2.3%	0.7%	-1.6%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Aside from the food program, the vast majority of Two-, Three-, Four-Star and non-certified centers do not receive external financial supports or reduced-cost services. Unlike the pattern found above for accredited vs non-accredited centers, Texas Rising Star certified centers are no less likely to receive the supports measured here, as compared to non-certified centers. In fact, Four-Star centers are slightly more likely to receive supports from a couple of sources: financial donations from religious institutions, and reduced-cost supplies. Perhaps not coincidentally, these are the only two sources from which accredited centers also enjoyed more support, in comparison to non-accredited centers.

Table 12 displays the Texas Rising Star Four-Star difference and the Accreditation differences in external supports from the prior two tables in a side-by-side format to simplify comparison of these two major quality ‘effects.’

Table 12. External Supports, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference	Accreditation Difference
Financial Donations		
Federal Child Care Food Program	+1.3%	-13.5% **
CCMS (other than subsidies)	+1.6%	+0.7%
United Way	-3.8%	-7.9% **
Religious institutions	+1.7% *	+1.1% *
Local, state or federal government funding	-3.0%	-6.1% *
Private or individual donations	-1.0%	-4.1%
YMCA / YWCA	-0.3%	-0.2%
School district	-0.6%	-0.5%
Foundations	-1.5%	-5.0% *
Other	+0.6%	+1.5%
Reduced cost services		
Building use	-2.8%	-6.2% **
Utilities	-3.1%	-5.2% *
Volunteer work	+1.3%	+2.0%
Furniture or equipment	+1.2%	+1.1%
Supplies	+2.2% *	+1.7% *
Other	-1.6%	-0.7%

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at p<.01; *= significant at p<.05

Associations or Affiliations

Child care centers that affiliate with other organizations, such as a churches or public schools, may also experience cost benefits through these associations that they may not have been aware of and/or not reported as direct financial support on the items discussed above. Potential benefits of affiliation may include free or reduced costs in building use, utilities, equipment, and/or supplies, among others. The data presented in Table 13 indicate that about 10 percent of accredited and non-accredited centers are associated with a church or religious organization. Although the associations with other types of organizations tend to be low for both accredited and non-accredited centers, the exception is for associations with YMCA/YWCA organizations and public schools. Non-accredited centers are far more likely to report associations with YMCA/YWCA or public schools, as compared to accredited centers.

Table 13. Associations or Affiliations by Accreditation

Associations	Non-Accredited	Accredited	Accreditation Difference
Church or religious organization	9.2%	10.7%	+1.5%
Community-based organization	0.2%	1.0%	+0.8%
YMCA/ YWCA	12.7%	0.0%	-12.7% **
Public school	16.1%	2.3%	-13.8% **
Private or parochial school	1.4%	0.4%	-1.0%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Similarly, as shown in Table 14 the rates of association with external organizations among Texas Rising Star certified and non-certified centers are comparable to the patterns seen among accredited and non-accredited centers discussed above. Associations with YMCA/YWCA organizations and public schools are rare among Texas Rising Star certified centers, as fewer report such associations compared to non-certified centers.

Table 14. Associations or Affiliations by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Church or religious organization	8.0%	4.5%	-3.5%	8.2%	+0.2%
Community-based organization	0.0%	1.3%	+1.3%	2.5%	+2.5% **
YMCA/ YWCA	12.8%	2.6%	-10.2% **	4.0%	-8.8% **
Public school	15.8%	7.6%	-8.2% *	5.3%	-10.5% **
Private or parochial school	1.5%	0.0%	-1.5%	0.0%	-1.5% *

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Table 15 displays the Texas Rising Star Four-Star difference and the Accreditation difference columns from the two tables above in a side-by-side format allowing for quick comparison of the quality ‘effects’ of the two similar but distinct quality rating systems.

Table 15. Associations or Affiliations, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference	Accreditation Difference
Church or religious organization	+0.2%	+1.5%
Community-based organization	+2.5% **	+0.8%
YMCA/ YWCA	-8.8% **	-12.7% **
Public school	-10.5% **	-13.8% **
Private or parochial school	-1.5% *	-1.0%

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at p<.01; *= significant at p<.05

We used a price model to simultaneously test all of the potential external support factors discussed in this section, including financial supports, reduced-cost services, and associations, and found five sources that bear a strong and independent statistical relationship with prices charged for care. Some child care centers receive a public service benefit from their local utility provider that reduces their utility costs, savings which are then passed on to the consumer. Often, meals and snacks served to children are included in the cost of services, but child care facilities participating in the Child and Adult Food Program (CACFP) receive funds from the federal government to provide meals and snacks, savings which appear to be passed on to consumers. In addition to these factors, we found that some associations, such as with churches and religious organizations, community-based organizations, or public schools, were reliably associated with changes in the pricing of care.

The single biggest factor among the external supports studied here is participation in the Federal Child Care Food program, which is often associated with a reduction in the price of care of between ten and twenty percent. Calculator 8 takes a closer look, for any selected area and age group, at the pricing implications of the provision of free food and meals, including both participation in the food program as well as the number of meals and snacks served per day as factors in the analysis. If one double-clicks Calculator 8 to activate it, turns the teal-colored switch to 'Yes' to indicate participation in the food program, it is readily apparent that these factors can make a big difference in the estimated price of care. The pattern of results in Calculator 8 suggests that participation in the food program is associated with a substantially reduced price of care, while each additional snack served per day is associated with a smaller bump up in price.

Calculator 8. Center Meals and Food Program

Price Calculator based on Area, Age, and Meal Supports

The following calculator allows you to estimate the baseline price of childcare by age group and area based on your meal supports.

Please make the following selections to determine your baseline price.

Step 1: Please select an area

Dallas

Step 2: Please select an age group

Infant (full day)

Step 3: Please select an interval

Daily

Step 4: Please select program meal supports

Federal Child Care Food Program Yes ▼

Free food provided: Snacks per day 0

Estimating prices for full day care

<i>Baseline daily price without meal supports for the infant age group in the Dallas area</i>	\$45.00 per day
<i>Baseline daily price with meal supports for the infant age group in the Dallas area</i>	\$41.00 per day
<i>Difference</i>	-\$4.04 per day -9.0%

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

Taken together, the analysis of external supports suggests that if we can account for the cost difference among facilities that receive services or donations, or those that participate in the federal food program, we have a better chance of more precisely estimating the pricing for quality factors in which we are interested. In the analysis of quality factors in centers presented below, external supports are typically controlled statistically by the inclusion of a composite measure in the model (see Appendix A for model details). What this means, in effect, is that the estimated prices are adjusted to reflect what they would be if all centers received the average amount of external support. This helps to isolate the estimated price of quality factors, the signal of interest, by reducing the influence of noise, in this case, the external supports.

Components of Quality Care

Having established a reasonable method for controlling extraneous pricing differences among centers in external support levels, we turn our attention to structural quality factors, which represent choices that center directors can make to affect the level of quality care provided.

The current model of ECE quality is founded on the interactions between the caregiver and the young child, referred to as process quality, which includes children’s daily experiences while they interact with caregivers, the environment, and the pedagogy of curriculum implementation (Slot et al., 2015). The current model suggests that early child development is influenced directly by process quality and indirectly by program structural factors such as ECE providers’ education and training, the ratio of children to providers, group sizes, and providers’ wages and benefits, among other factors. A simplified view of the current ECE model suggests that structural quality factors support the process quality that influences child outcomes. Thus, structural quality factors indirectly influence child outcomes (Burchinal et al, 2015). Essentially all of the components of quality care measured in this survey and discussed here in relation to child care pricing are structural quality factors that can be measured by objective indicators and are subject to policy regulations and funding decisions.

In this section, various elements related to structural quality factors of care are discussed, with particular focus on how they differ between nationally accredited and non-accredited centers, as well as between Texas Rising Star certified and non-certified centers. This comparison shows, in essence, to what extent these quality factors are actually utilized or implemented by centers that have achieved each level of accreditation or certification. In other words, they represent the common policy levers used by center directors to implement higher quality. The discussions include the following elements that support the structural quality of ECE programs: staffing ratios and staff turnover; staff education and experience; staff training expenses; earnings and benefits; and curriculum, assessment, and staff planning time.

Staffing Patterns

Early childhood socioecological, attachment, and learning theories present child development frameworks based on the quality of the relationship between the caregiver and child (Bronfenbrenner, U., & Morris, P., 2006; Ainsworth, M., 1989; and Gopnik, A., Meltzoff, A., & Kuhl, P., 1999). Child care models of quality are built upon these theories holding that the quantity and quality of interactions between a young child and his or her primary caregivers, including ECE providers, are the most important factors in early development (Burchinal, M., 2018). One central premise of the ECE quality

model purports that lower children per teacher ratios improve child outcomes by increasing opportunities for individual interactions and educational instruction from caregivers. Research on this factor has reported modest effect sizes on children's outcomes for fewer children per teacher or smaller group sizes (Mashburn, A., et al., 2008), with the strongest effect of child-to-caregiver ratio upon children's outcomes occurring in groups of younger children: infants and toddlers.¹⁵

The following tables present information on many issues relevant to staffing ECE centers, including the use of part-time staff, staff turnover rates, child-to-caregiver ratios and group sizes, and how staff absences are covered in the classroom. Table 16 indicates that accredited centers employ fewer part-time staff and report a lower rate of staff turnover, as compared to non-accredited centers. Central to the practice of quality care is a stable, consistent, and nurturing relationship between child and teacher. Professional organizations and researchers report varying and concerning statistics regarding staff turnover. A 2015 Child Care Aware, Inc. report reported a staff turnover rate as high as 25 percent, while Whitebook, Phillips, and Howes (2014), reported a 2012 mean staff turnover rate at child care centers of 13 percent.¹⁶ By comparison, the turnover rate in non-accredited centers in this study is high, at over 33 percent, but the reduced rate of 22 percent among accredited centers is relatively more consistent with goals for higher quality care.

Somewhat surprisingly, the data on children per teacher ratios revealed essentially no statistically significant differences in ratios in the expected direction. The data suggest that on average accredited centers in Texas simply do not appear to be caring for fewer children per teacher as the ECE quality model would predict. In fact, the one significant difference in ratios was for school-age children and was opposite in direction: accredited centers tend to care for more school-age children per teacher than non-accredited centers. Regarding group sizes, accredited centers did report slightly more teachers per infant and toddler classroom compared with non-accredited centers. However, the quality implications of this are unclear in the face of null results on all of the younger children per teacher ratios. The higher ratios for school-age children at accredited centers, combined with higher infant and toddler teacher per classroom ratios, could indicate that accredited centers are shifting some costs of infant and toddler care to school-age care. Table 16 also shows statically significant differences in how teacher absences are covered. Accredited centers are less likely to rely on directors covering for absent teachers, and more likely to instead use existing staff to cover for absent teachers.

¹⁵ Information on Texas Day Care Licensing Standards ratios and group size is available at: Texas Department of Family and Protective Services. Minimum Standards for Child Care Centers. 2018. Available at: <https://hhs.texas.gov/doing-business-hhs/provider-portals/protective-services-providers/child-care-licensing/minimum-standards>

¹⁶ New data on staff turnover was collected by the 2019 National Survey of Early Care and Education and will be available by summer 2021. Visit: <https://www.childandfamilydataarchive.org/cfda/archives/cfda/studies/37886>

Table 16. Staffing Patterns by Accreditation

	Non-Accredited	Accredited	Accreditation Difference	
Part-time staffing ratio: Percent of staff members that are part-time	30.2%	21.3%	-8.9%	**
Turnover ratio: percent of teachers leaving in the last year	33.7%	21.8%	-11.9%	**
Children per teacher ratio, infants	4.5	4.3	-0.2	
Children per teacher ratio, toddlers	7.9	7.8	-0.1	
Children per teacher ratio, preschoolers	12.1	12.5	+0.4	
Children per teacher ratio, school age	15.2	17.5	+2.3	**
Teachers per classroom ratio, infants	1.8	2.0	+0.2	**
Teachers per classroom ratio, toddlers	1.6	1.8	+0.2	**
Teachers per classroom ratio, preschoolers	1.6	1.6	0	
Teachers per classroom ratio, school age	1.8	1.6	-0.2	
Cover for absent staff: director substitutes	20.6%	10.9%	-9.7%	**
Cover for absent staff: existing staff member substitutes	69.0%	80.5%	+11.5%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Table 17 indicates that Two- or Three-Star centers do not generally distinguish themselves from non-certified centers on these staffing measures, with the only significant difference being that they employ fewer part-time staff compared to non-certified centers. The differences between Four-Star centers and non-certified centers are more notable, and generally follow the pattern reported for accredited and non-accredited centers, including the use of part-time staff, staff turnover rates, infant and toddler teacher per classroom ratios, and how staff absences are covered. The only ratio finding that was in line with expectations of the standard model of ECE quality was a slightly lower children per teacher ratio for infants in Four-Star centers, as compared to non-certified centers.

Table 17. Staffing Patterns by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Part-time staffing ratio: Percent of staff members that are part-time	29.1%	21.9%	-7.2% *	20.5%	-8.6% **
Turnover ratio: percent of teachers leaving in the last year	35.9%	33.1%	-2.8%	26.0%	-9.9% *
Children per teacher ratio, infants	4.6	4.5	-0.1	4.3	-0.3 *
Children per teacher ratio, toddlers	8.2	8.1	-0.1	7.9	-0.3
Children per teacher ratio, preschoolers	12.7	13.1	+0.4	12.9	+0.2
Children per teacher ratio, school-age	15.8	16.7	+0.9	16.7	+0.9
Teachers per classroom ratio, infants	1.7	1.7	0	1.9	+0.2 **
Teachers per classroom ratio, toddlers	1.4	1.4	0	1.7	+0.3 **
Teachers per classroom ratio, preschoolers	1.5	1.5	0	1.5	0
Teachers per classroom ratio, school-age	1.6	1.7	+0.1	1.6	0
Cover for absent staff: director substitutes	21.8%	16.8%	-5.0%	11.5%	-10.3% **
Cover for absent staff: existing staff member substitutes	70.0%	78.1%	+8.1%	81.1%	+11.1% **

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Table 18 facilitates comparison of the Four-Star and Accreditation effects on staffing patterns.

Table 18. Staffing Patterns, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference		Accreditation Difference	
Part-time staffing ratio: Percent of staff members that are part-time	-8.6%	**	-8.9%	**
Turnover ratio: percent of teachers leaving in the last year	-9.9%	*	-11.9%	**
Children per teacher ratio, infants	-0.3	*	-0.2	
Children per teacher ratio, toddlers	-0.3		-0.1	
Children per teacher ratio, preschoolers	+0.2		+0.4	
Children per teacher ratio, school age	+0.9		+2.3	**
Teachers per classroom ratio, infants	+0.2	**	+0.2	**
Teachers per classroom ratio, toddlers	+0.3	**	+0.2	**
Teachers per classroom ratio, preschoolers	0		0	
Teachers per classroom ratio, school age	0		-0.2	
Cover for absent staff: director substitutes	-10.3%	**	-9.7%	**
Cover for absent staff: existing staff member substitutes	+11.1%	**	+11.5%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at $p < .01$; *= significant at $p < .05$

Calculator 9 illustrates our best price model that includes children per teacher ratios. Although it illuminates a wide variety of factors important to child care pricing, children per teacher ratios do not emerge as an important factor, and thus Calculator 9 does not provide reliable pricing guidance on ratios.

First, a note about geography. In a state as big as Texas with a wide range of labor markets, the single best indicator of prices charged for child care that we have found is the cost of real estate. The inclusion of average home selling price in Calculator 9 allows baseline pricing for care to be established in a similar way to choosing one's metropolitan area in earlier calculators. Changing the values for 'average single-family home selling price' at the top of the calculator reveals fairly wide swings in the price of child care, depending on the area. One can use the lower section of Calculator 9 to look up recent average home selling prices for most counties.

Price Calculator based on Children per Teacher Ratios and other Pricing Factors

The following calculator allows you to estimate the baseline price of full day childcare by children per teacher ratios and other pricing factors

Please make the following selections to determine your baseline price.

Double Click to Activate

Step 1: Please enter the average single family home selling price for your area (see LOOKUP*)

\$152,000

Step 2: Please select an age group

Infant

Step 3: Please select an interval

Weekly

Step 4: Please enter the typical number of children per teacher for the infant age group

3

Step 5: Please select external supports and associations

Federal Child Care Food Program

Yes

Are you associated with a church or religious organization?

Yes

Step 6: Please enter hourly wages and select benefits provided to staff:

Average hourly salary for teachers:

\$11.00 per hour

Health insurance

No

Reduced tuition for staff children

No

Baseline weekly price for the Infant age group with the selected cost factors in areas where homes cost around \$152,000

\$122 per week

*** LOOKUP: Use this to look up the average home selling price in your county:**

Select county: Anderson

Average price: \$152,000

Source: RMC statistical analysis of the cost of quality data plus publicly available data.

Note that although the cost of real estate is important to providing child care, this single measure also likely captures a large number of related factors associated with a higher cost of living in some areas, including urbanicity, labor costs, and others. For a relatively simple statistical model, however, it provides good guidance as to what one might expect to pay for child care in any given area. And one advantage of a simpler statistical model, it is better suited to isolate more elusive factors, such as children per teacher ratios.

Given that labor expenses represent one of the biggest cost areas among centers, one might expect children per teacher ratios to bear a strong and obvious relationship to prices charged for care, even in the absence of evidence that accredited or certified centers have lower ratios. Unfortunately, a clear link between ratios and pricing has been difficult to establish. One explanation for the difficulty lies in evidence we uncovered indicating centers with lower ratios seem to compensate in other cost-saving ways. For example, centers with lower ratios of children per teacher were found to be slightly less generous with hourly wages and less likely to provide certain benefits. Centers affiliated with churches also tended to have lower ratios. By including factors such as these in the price model, and thereby holding their effects constant, it was possible to somewhat clarify the relationship between ratios and prices charged. Even so, the estimated differences in prices revealed by changing ratios in this calculator are quite small. The relationship of prices to ratios is most clear for the infant age group, in terms of the price swings observed, but they are still so weak that they are not likely to provide good pricing guidance for a center that decided to change their infant ratios without making compensatory changes on these or other cost factors.

Another approach to modeling prices charged for care based in part on staffing is shown in Calculator 10. Like the last calculator, this one relies on average home selling prices to establish a geographic baseline rate. A unique feature of Calculator 10 is that it attempts to test for cross-subsidization of pricing across age groups by focusing narrowly on prices for toddlers and preschoolers, then including factors indicating whether the center also serves the youngest (infants) and oldest (school-age) children. Indeed, the results indicate that price subsidization does seem to occur among centers that serve infants: their rates for toddlers and preschoolers are higher than those of centers that do not serve infants. It is widely recognized that care for infants is expensive to provide, so much so that many facilities do not serve this age group at all, or serve them in limited numbers. This evidence points to a pricing strategy that may help to keep infant care somewhat affordable, by spreading the costs to parents of older children. Cross-subsidization was also anticipated among centers that serve school-age children, with the expectation that cost savings in that age group might lower the costs for toddlers and preschoolers, but that effect was weaker and not statistically significant (but see Calculator 14 for such pricing effects in homes).

Centers: Facility Features and other Pricing Factors

The following calculator allows you to estimate the baseline price of full day childcare for toddlers or preschoolers by features of the center

Please make the following selections to determine your baseline price.

Step 1: Please enter the average single family home selling price for your area (see LOOKUP*)

Step 2: Please select an age group **Step 3: Please select an interval**

Step 4: Please select features of center

Center also cares for infants

Center also cares for school age children

Step 5: Please select how center typically covers for direct care absences or vacancies:

Baseline monthly price for the toddler age group with the selected cost factors in areas where homes cost around \$137,000 **\$539 per month**

***LOOKUP: Use this to look up the average home selling price in your county:**

Select county: Average price:

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data plus publicly available data.

Finally, an examination of staffing strategies suggests that center policies on how they cover for absences or vacancies seem to have implications for pricing. Centers that report the director typically covers for absences seem to have cost savings, relative to those who do not use this strategy. Conversely, those centers in which another existing staff member typically substitutes tend to charge more.

Staff Education and Experience

A review of several preschool research studies evaluating teacher education, classroom quality, and children’s outcomes suggests that teacher quality is complex and that teacher level of education alone might not be a consistent predictor of quality (Early et al., 2007). Rather, Pianta et al. (2009) suggest that pre-service and in-service training could provide the knowledge and supports teachers need to provide quality early education experiences for children. The following two tables in this section examine the relationships between accreditation or Texas Rising Star certification and staff

education and experience levels. As such, they represent the extent to which quality care is implemented through the hiring and retention of more educated and experienced staff.

Table 19 shows staff education and experience, revealing that by far the most common highest level of education in ECE is a high school diploma (HSD) or GED. In general, comparing accredited to non-accredited centers shows that accredited centers participating in this study tended to employ staff with higher educational attainment and higher levels of experience working in ECE, as compared to non-accredited centers. Accredited centers employ fewer HSD/GED staff than do non-accredited centers. Conversely, accredited centers tended to employ more staff with post-secondary education compared to non-accredited centers, including significantly more with bachelor's degrees and child development associate (CDA) credentials. While they have similar proportions of staff with six or more years of experience working in ECE, accredited centers employ fewer inexperienced staff, or those with less than two years of experience, compared to non-accredited centers.

Table 19. Staff Education and Experience by Accreditation Status

	Non-Accredited	Accredited	Accreditation Difference	
Staff with highest degree - High school or GED	73.8%	64.2%	-9.6%	**
Staff with highest degree - Associates	9.4%	12.3%	+2.9%	
Staff with highest degree - Bachelors	14.6%	19.6%	+5.0%	*
Staff with highest degree - Masters	1.4%	1.8%	+0.4%	
Staff with highest degree - Doctorate	0.1%	0.0%	-0.1%	
Direct care staff with a CDA	17.0%	27.4%	+10.4%	**
Staff with 6 or more years of experience working in ECE	46.6%	48.3%	+1.7%	
Staff with less than two years of experience working in ECE	28.9%	21.8%	-7.1%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Table 20 illustrates this comparison for Texas Rising Star certified vs non-certified centers. As with accreditation, the data indicate that Four-Star centers tend to employ staff with higher educational attainment and experience working in ECE compared to non-certified centers. Four-Star centers have significantly fewer HSD/GED staff compared to non-accredited centers. Four-Star centers also have higher proportions of staff with any form of post-secondary education compared to non-certified centers, including significantly more with bachelor's degrees and child development associate (CDA) credentials. Further, Four-Star centers have fewer inexperienced staff, as measured by those with less than two years of experience, in comparison to non-certified centers.

Although they show similar patterns, the differences between Texas Rising Star Two- or Three-Star centers and non-certified centers are quite modest. Most differences are not statistically significant, however, Two- and Three-Star center staff are more likely to have obtained a CDA, in

comparison to non-certified centers. In contrast, the comparisons between Four-Star centers and non-certified centers were much more robust, revealing significant differences in half of the measures.

Table 20. Staff Education and Experience by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Staff with highest degree - High school or GED	77.9%	76.8%	-1.1%	67.4%	-10.5% **
Staff with highest degree - Associates	9.8%	10.1%	+0.3%	12.8%	+3.0%
Staff with highest degree - Bachelors	9.9%	10.4%	+0.5%	15.8%	+5.9% **
Staff with highest degree - Masters	1.3%	0.8%	-0.5%	1.8%	+0.5%
Staff with highest degree - Doctorate	0.2%	0.3%	+0.1%	0.2%	0%
Direct care staff with a CDA	17.5%	23.6%	+6.1% *	27.4%	+9.9% **
Staff with 6 or more years of experience working in ECE	46.2%	41.7%	-4.5%	49.7%	+3.5%
Staff with less than two years of experience working in ECE	28.1%	26.7%	-1.4%	18.9%	-9.2% **

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05. Texas Rising Star certified Four-Star centers may also have national accreditation.

Table 21 illustrates the comparison of the Four-Star and Accreditation effects on staff education and experience levels.

Table 21. Staff Education and Experience, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference		Accreditation Difference	
Staff with highest degree - High school or GED	-10.5%	**	-9.6%	**
Staff with highest degree - Associates	+3.0%		+2.9%	
Staff with highest degree - Bachelors	+5.9%	**	+5.0%	*
Staff with highest degree - Masters	+0.5%		+0.4%	
Staff with highest degree - Doctorate	0%		-0.1%	
Direct care staff with a CDA	+9.9%	**	+10.4%	**
Staff with 6 or more years of experience working in ECE	+3.5%		+1.7%	
Staff with less than two years of experience working in ECE	-9.2%	**	-7.1%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at p<.01; *= significant at p<.05

Although we have developed pricing calculators for centers that utilize staff education and experience to estimate child care pricing, none of them make a compelling case for substantial price swings based on the education or experience levels of the staff. Thus, they are not presented here. There is evidence, however, of this education/experience dynamic playing a role in the pricing of care among registered and licensed homes as a function of the owner’s education, as discussed in a later section (see Calculator 14).

Staff Training

In-service training, that is training provided to staff during their employment, is an ongoing requirement of Texas HHSC Child Care Regulation, Texas Rising Star certification, and national accreditation organizations. Research has reinforced the importance of ongoing training for ECE teachers. A meta-analysis of randomized controlled trials, published articles, and dissertations measuring the effects of in-service training reported that training is generally effective in improving child care quality, caregiver interaction skills, and children’s development (Werner et al, 2016). Staff training varies in cost from conferences that may include travel and accommodation expenses, to relatively affordable online and onsite training. Texas Rising Star certified providers have access to no-cost training supports through their local Boards and the Children’s Learning Institute (CLI). Local Boards use quality funding to offer face-to-face training opportunities that are accessible to many programs and that can be provided at individual centers or the locations in their service area. They may also offer centers grants to attend other types of trainings and conferences. Further, the CLI offers Texas Rising Star certified centers no-cost online training resources, including CDA classes.

The data in Table 22 indicate that over half of all accredited and non-accredited centers reported paying conference and workshop training fees, and over 60 percent of accredited and non-accredited centers report paying onsite training fees. Accredited centers are significantly less likely (48%) to report expenses for online training fees as compared to non-accredited centers (60%).

Table 22. Staff Training by Accreditation

	Non-Accredited	Accredited	Accreditation Difference
Conference or workshop fees	51.8%	53.8%	+2.0%
Online training fees	60.2%	48.0%	-12.2% **
Onsite training fees	62.0%	60.1%	-1.9%
Payments to substitutes to cover the classroom while staff are in training	16.5%	22.4%	+5.9%
Travel costs for off-site training	24.7%	25.3%	+0.6%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

In an echo of patterns seen elsewhere, Table 23 indicates that Two- and Three-Star centers were not distinguishable from non-certified centers in the reporting of training expenses, regardless of the type of training. Four-Star centers did report a greater likelihood of having expenses for conference or workshop fees, as compared to non-certified centers. Four-star centers were also more likely to pay for training supports such as substitute teachers to cover for staff who are in training when compared to non-certified centers.

Table 23. Staff Training by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Conference or workshop fees	49.3%	48.6%	-0.7%	60.1%	+10.8% *
Online training fees	61.0%	52.4%	-8.6%	57.4%	-3.6%
Onsite training fees	63.3%	55.3%	-8.0%	62.6%	-0.7%
Payments to substitutes to cover the classroom while staff are in training	13.8%	17.1%	+3.3%	22.8%	+9.0% *
Travel costs for off-site training	26.4%	18.6%	-7.8%	27.7%	+1.3%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at $p < .01$, *= at $p < .05$

Table 24 compares the Texas Rising Star Four-Star effects against the Accreditation effects on measures of staff training.

Table 24. Staff Training, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference	Accreditation Difference
Conference or workshop fees	+10.8% *	+2.0%
Online training fees	-3.6%	-12.2% **
Onsite training fees	-0.7%	-1.9%
Payments to substitutes to cover the classroom while staff are in training	+9.0% *	+5.9%
Travel costs for off-site training	+1.3%	+0.6%

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at $p < .01$; *= significant at $p < .05$

Although there is some evidence that online training is associated with reduced pricing of care, and conference fees are associated with higher prices, this was not deemed sufficiently compelling to support a calculator featuring training pricing. Later in this report, in the licensed and registered homes section, a similar finding confirms more expensive care among homes utilizing conferences, and less expensive care among homes utilizing online training.

Wages and Benefits

One way to increase child care quality is to improve the compensation package for teachers through a combination of salary and benefits, thereby raising the chances of hiring and retaining better quality staff. Higher wages and benefits may also support a healthier workforce with less dependence on public assistance. The following two tables examine the relationship between accreditation or Texas Rising Star certification and staff wages and benefits. Following the tables, Calculator 11 illustrates the

estimated pricing for full-day care based on average compensation levels and benefits provided to teachers.

Table 25 shows that accredited and non-accredited centers differ significantly on all nine measures of wages and benefits, with accredited centers being more generous in their pay and benefits. Accredited centers pay significantly higher wages for both lead and assistant full-time teachers than non-accredited centers; unfortunately, the pay is still low by most standards. Accredited centers are also more likely to provide benefits than non-accredited centers, including being more than twice as likely to provide health insurance, easily the most valuable benefit. More than 80 percent of accredited centers offer tuition assistance benefits, compared to about a third of non-accredited centers. Two-thirds of accredited centers offer retirement benefits, compared to only about a quarter of non-accredited centers. Essentially all accredited centers provide staff with paid time off, compared to just over three-quarters of non-accredited centers. Finally, the vast majority of both accredited and non-accredited centers offer reduced tuition for staff children enrolled in a program.

Table 25. Wages and Benefits by Accreditation

	Non-Accredited	Accredited	Accreditation Difference	
Hourly wage for full-time teacher	\$10.96	\$12.16	+\$1.20	**
Hourly wage for full-time assistant teacher	\$10.23	\$10.90	+\$0.67	**
Hourly wage for full-time lead teacher	\$12.09	\$13.38	+\$1.29	**
Difference in hourly wage between highest and lowest paid teachers	\$2.38	\$2.96	+\$0.58	**
Benefits - Retirement programs such as annuity, 401(k) or 403(b) plan	26.3%	68.7%	+42.4%	**
Benefits - Reduced tuition for staff children enrolled in your program	88.5%	94.5%	+6.0%	*
Benefits - Tuition assistance for college/CDA courses	34.9%	81.8%	+46.9%	**
Benefits - Health insurance	35.1%	82.1%	+47.0%	**
Benefits - Paid time off for vacation, holidays, or other	77.5%	99.6%	+22.1%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Data in the rightmost columns of Table 26 indicate a very similar pattern to that seen for accreditation, with Four-Star centers being significantly more generous in providing wages and benefits than non-certified centers on seven of the nine measures. Four-Star centers offer significantly higher wages than non-certified centers for full-time lead teachers; however, both groups offer similar wages for full-time assistant teachers. Four-Star centers also provide benefits at much higher rates than non-certified centers. Illustrating the largest gap, more than two-thirds of Four-Star centers offer tuition reimbursement for college and CDA courses compared to about a third of non-certified centers. And the

gap in health insurance offered is over 25 percentage points, representing a valuable benefit. The vast majority of both Four-Star and non-certified centers offer reduced tuition for staff children enrolled in a program, with no significant difference between the two groups.

In contrast, as a group Texas Rising Star Two- or Three-Star centers are not overly generous with wages and benefits, relative to non-certified centers, resulting in only two significant differences out of the nine measures of wages and benefits. Two- or Three-Star centers were more likely to offer tuition assistance for college and CDA courses, and paid time off for vacations and holidays, compared to non-certified centers.

Table 26. Wages and Benefits by Texas Rising Star Status

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Hourly wage for full-time teacher	\$10.48	\$10.38	-\$0.10	\$11.26	+\$0.78 **
Hourly wage for full-time assistant teacher	\$9.94	\$9.95	+\$0.01	\$10.13	+\$0.19
Hourly wage for full-time lead teacher	\$11.40	\$11.43	+\$0.03	\$12.09	+\$0.69 *
Difference in hourly wage between highest and lowest paid teachers	\$2.17	\$2.20	+\$0.03	\$2.77	+\$0.60 **
Benefits - Retirement programs such as annuity, 401(k) or 403(b) plan	24.0%	24.8%	+0.8%	49.3%	+25.3% **
Benefits - Reduced tuition for staff children enrolled in your program	86.3%	86.7%	+0.4%	90.2%	+3.9%
Benefits - Tuition assistance for college/CDA courses	34.1%	55.6%	+21.5% **	68.6%	+34.5% **
Benefits - Health insurance	32.0%	33.6%	+1.6%	56.7%	+24.7% **
Benefits - Paid time off for vacation, holidays, or other	76.0%	86.5%	+10.5% *	91.3%	+15.3% **

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Table 27 facilitates comparison of the Texas Rising Star Four-Star effects against the Accreditation effects on staff wages and benefits measures.

Table 27. Wages and Benefits, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference	Accreditation Difference
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Hourly wage for full-time teacher	+\$0.78	**	+\$1.20	**
Hourly wage for full-time assistant teacher	+\$0.19		+\$0.67	**
Hourly wage for full-time lead teacher	+\$0.69	*	+\$1.29	**
Difference in hourly wage between highest and lowest paid teachers	+\$0.60	**	+\$0.58	**
Benefits - Retirement programs such as annuity, 401(k) or 403(b) plan	+25.3%	**	+42.4%	**
Benefits - Reduced tuition for staff children enrolled in your program	+3.9%		+6.0%	*
Benefits - Tuition assistance for college/CDA courses	+34.5%	**	+46.9%	**
Benefits - Health insurance	+24.7%	**	+47.0%	**
Benefits - Paid time off for vacation, holidays, or other	+15.3%	**	+22.1%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at $p < .01$; *= significant at $p < .05$

Calculator 11 illustrates the estimated pricing of care based on compensation levels and benefits provided to teachers. In addition to the usual choices, the user enters their average hourly salaries for lead and assistant teachers, or only one value if they do not have assistant teachers. Then the user selects which benefits are offered.

Centers: Wages and Benefits Calculator

The following calculator allows you to estimate the baseline price of childcare by age group based on your average salaries for lead teachers and assistant teachers, with and without benefits.

Please make the following selections to determine your baseline price.

Double Click to Activate

Step 1: Please select an age group:

Toddler (full day)

Step 2: Please select an interval

Weekly

Step 3: Please enter your average hourly salary for teachers:

Lead teacher salary: \$11.50 per hour

Assistant teacher salary: \$9.00 per hour

(Leave blank if you do not have assistant teachers)

Estimating prices for full day care

Baseline weekly price without benefits for the toddler age group

\$135 per week

Step 4: To calculate baseline price with benefits, please select the benefits you provide:

Health insurance

No

Reduced tuition for staff children

Yes

Tuition assistance (college, CDA)

Yes

Paid time off (vacation, holidays)

Yes

Retirement program (annuity, 401K)

Yes

Baseline weekly price with selected benefits for the Toddler (full day) age group

\$183 per week

Difference with selected benefits

\$48 per week

35.3%

Source: RMC statistical analysis of the cost of quality data.

The upper section of Calculator 11 displays baseline pricing without benefits. Not surprisingly, prices of care increase as teachers' hourly wages are increased. In the bottom section of the calculator, the additional price associated with providing the selected benefits to teachers is presented. As one might expect, the provision of health insurance has the biggest impact on care pricing, but all of the listed benefits have significant and measurable pricing impacts. Notably, care at a center that provides all five of these benefits is priced around 50 to 90 percent more than at facilities that provide none of them.

Curriculum and Assessment

The assessment of children's progress toward developmental gains informs the implementation of the curriculum and the planning of learning activities for the classroom and individual children. Assessment and the time required to plan learning activities are integral to curriculum implementation. Several studies evaluating the use of evidence-based curricula, combined with staff training or coaching, report curricula and staff training are related to substantial gains in children's literacy skills (Wasik & Hindman, 2011; Powell et al., 2010). Similarly, large impacts have been reported for evidence-based math curricula (Clements & Sarama, 2008), and curricula that promote knowledge of emotions, executive functioning, and social skills (Raver, et al. 2008). However, in a review of research examining the relationships between ECE program structural quality components and children's outcomes, Burchinal (2018), found that not all curricula are effective and many do not have the anticipated impacts on children's outcomes.

In Table 28, the data reveal a statistically significant difference between accredited centers and non-accredited centers for seven of the eight measures of curriculum, assessment, and planning time. The vast majority of centers report using a curriculum, or prepared set of learning and play activities; it is more common among accredited centers. Accredited centers are more likely to use a curriculum developed by the provider, whereas over half of non-accredited centers use a prepared curriculum. Accredited centers are more likely to use the Creative Curriculum®, whereas non-accredited centers are more likely to use some other curriculum.

While the majority of programs report assessing children, a formal child assessment tool is used by almost 85 percent of accredited centers but only half of the non-accredited centers. Non-accredited centers are more likely to report using informal assessments. Finally, accredited centers report providing staff with about 20 percent more paid time to plan class activities, which works out to about an extra 36 minutes of planning time per week, relative to non-accredited centers.

Table 28. Curriculum, Assessment, and Planning Time by Accreditation

	Non-Accredited	Accredited	Accreditation Difference	
Use a curriculum or prepared set of learning and play activities:	83.2%	95.9%	+12.7%	**
Developed by provider	43.2%	64.6%	+21.4%	**
Creative Curriculum®	1.9%	10.8%	+8.9%	**
Frog street	17.5%	12.9%	-4.6%	
Other	34.9%	19.3%	-15.6%	**
Total paid hours each week direct care staff are given for planning children's activities	3.1	3.7	+0.6	**
Use formal assessments to measure children's developmental progress	52.1%	84.4%	+32.3%	**
Use informal assessments to measure children's developmental progress	28.0%	11.9%	-16.1%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Every Local Workforce Development Board receives funding to enhance the quality of Texas Rising Star participant programs. Many Boards offer a curriculum at no cost to area Texas Rising Star providers, which could potentially distort the results of price models. Three- and Four-Star Texas Rising Star providers can also access child assessment and individual instruction resources from GOLD® by Teaching Strategies. In addition, Texas Rising Star programs have access to no-cost supports provided by the Children’s Learning Institute and the Texas Association for the Education of Young Children. These resources provide access to curricula, online professional development, child progress monitoring tools, classroom observation tools, and technical assistance.

The data presented in Table 29 indicate that curriculum effects among Texas Rising Star centers are widespread, regardless of the number of stars. Both Two- or Three-Star and Four-Star centers are more likely to use a curriculum or prepared set of learning and play activities when compared to non-certified centers. Two- and Three-Star centers are less likely to develop their own curriculum. And all Texas Rising Star providers, regardless of their number of stars, are more likely to use Frog Street or Creative Curriculum®. Similarly, when looking at assessments, both Two- and Three-Star and Four-Star certified providers are more likely to use formal assessments and less likely to use informal assessments, as compared to non-certified centers.

Table 29. Curriculum, Assessments, and Planning Time by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference		Texas Rising Star 4-Star	4-Star Difference	
Use a curriculum or prepared set of learning and play activities:	82.9%	91.3%	+8.4%	*	95.8%	+12.9%	**
Developed by provider	42.4%	20.2%	-22.2%	**	40.6%	-1.8%	
Creative Curriculum®	2.4%	11.2%	+8.8%	**	9.9%	+7.5%	**
Frog street	17.3%	42.9%	+25.6%	**	34.2%	+16.9%	**
Other	38.3%	29.8%	-8.5%		22.4%	-15.9%	**
Total paid hours each week direct care staff are given for planning children's activities	3.0	3.0	0		3.4	+0.4	
Use formal assessments to measure children's developmental progress	48.9%	84.0%	+35.1%	**	79.3%	+30.4%	**
Use informal assessments to measure children's developmental progress	29.1%	13.2%	-15.9%	**	17.4%	-11.7%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Table 30 presents a side-by-side comparison of the Texas Rising Star Four-Star effects against the Accreditation effects on curriculum, assessment, and planning time measures.

Table 30. Curriculum, Assessments, and Planning Time, Four-Star vs Accreditation Effects

	Texas Rising Star Four-Star Difference		Accreditation Difference	
Use a curriculum or prepared set of learning and play activities	+12.9%	**	+12.7%	**
Curriculum - Developed by provider	-1.8%		+21.4%	**
Curriculum - Creative Curriculum®	+7.5%	**	+8.9%	**
Curriculum - Frog street	+16.9%	**	-4.6%	
Curriculum - Other	-15.9%	**	-15.6%	**
Total paid hours each week are direct care staff are given for planning children's activities	+0.4		+0.6	**
Use formal assessments to measure children's developmental progress	+30.4%	**	+32.3%	**
Use informal assessments to measure children's developmental progress	-11.7%	**	-16.1%	**

Source: RMC statistical analysis of the cost of quality data. Note: **=significant at p<.01; *= significant at p<.05

Calculator 12 below illustrates the results of a price model including curriculum, assessment, and planning time measures. As expected in light of the observation that some curricula are provided free to Texas Rising Star providers, selecting the curriculum used sometimes provides strange results,

with some choices being associated with lower-priced care than the ‘no curriculum’ option. This indicates the results should not necessarily be trusted for price guidance on individual curricula, however, it could also be the case that curriculum choices are used to signal quality. Regarding assessments, those centers that conduct formal assessments offer the highest priced care, with informal assessments being second highest, and those not conducting assessments having the lowest priced care. Also as expected, the number of paid planning hours provided to teachers each week is associated with higher-priced care.

Calculator 12. Center Curriculum, Assessment, and Planning

Centers: Curriculum, Assessment, and Planning Calculator

The following calculator allows you to estimate the baseline price of full day childcare based on your curriculum, assessment, and planning for a selected age group.

Please make the following selections to determine your baseline price.

Step 1: Please select an age group

Infant

Step 2: Please select an interval

Weekly

Step 3: Please select a curriculum

Creative Curriculum (Includes Learning Games)

Step 4: Please select assessments done

formal assessment

Step 5: Please enter average hours teachers spend planning each week

2.0

Baseline weekly price for the Infant age group
\$215 per week

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

HOMES

As discussed earlier in this report, the foundations of the current model of ECE quality are the interactions between the caregiver and the young child. Specifically, the approach conceptualizes a path from structural characteristics to educational processes and then to child outcomes. Educational processes are framed and supported by structural conditions like the environment, teacher education, experience, and training, among other structural factors described as structural quality (Bryant, Zaslow, & Buchinal, 2010). Process quality covers all aspects of educational processes, the children’s daily experiences, and interactions between child and teacher. Though progress has been made in documenting certain features and variations of home-based care, research on the full array of home-based care is still more limited than research on child care centers (Hallam et al., 2017).

The following section first presents a description of the standards for licensed and registered homes, followed by a brief summary of the findings to date on the pricing of quality care among homes.

This is followed by a discussion of several program elements that support the structural quality of care for Texas Rising Star certified homes compared to non-certified homes, including staff education and experience; staff training expenses; earnings and benefits; staffing patterns; and curriculum, assessment, and staff planning time. Licensed and registered homes are combined throughout this discussion.

Standards for Licensed and Registered Homes

Both licensed and registered homes offer care in the primary caregiver’s home and must meet Child Care Regulation Minimum Standards for their program type. Table 31 outlines the differences between licensed and registered homes in group size and children’s ages, the minimum amount of care provided in hours per day and days per week, and the program oversight provided by Child Care Regulation. Generally speaking, licensed homes can take care of more children and are more closely monitored.

Table 31. Differences in Selected Child Care Minimum Standards for Licensed and Registered Homes

Regulation	Licensed	Registered
Group size and age of children	Care for seven to 12 children 13 or younger (no more than 12 children can be in care at any time, including children related to the caregiver).	Care for six unrelated children 13 or younger during school hours, and can also provide care and supervision for six additional school-age children after- school hours (no more than 12 children can be in care at any time, including children related to the caregiver).
Hours of care per day, number of days per week, & length of period providing care.	Provide care for at least two hours, but less than 24 hours, per day, for three or more days a week.	Provide care at least four hours a day, three or more days a week, for three or more consecutive weeks; or four hours a day for 40 or more days in a 1Two-month period.
Monitoring frequency	Receives at least one unannounced inspection per year.	Receives at least one unannounced inspection every one to two years.

Elements of Program Structure

A total of 109 licensed or registered homes completed the CQS, which yielded 769 rate observations. Both licensed and registered homes can participate in Texas Rising Star.¹⁷ The sample of higher quality licensed and registered homes for the CQS was designed to be representative of Texas

¹⁷ Although the 2020 TWC Child Care Market Rate Report identified that six percent of the homes in the survey sample identified as accredited, RMC was unable to match any homes in this studies sample to the NAFCC database, mostly due to sparse identifying information included in the NAFCC database for matching.

Rising Star homes statewide, the population of which is heavily skewed toward Four-Star homes, with relatively fewer Three-Star or Two-Star homes. After the data were processed in preparation for analysis (described in Appendix A), the sample included complete data from thirty-eight Four-Star homes, nine Three-Star homes, and fifteen Two-Star homes. This was deemed to be too few Two-Star and Three-Star home respondents to be able to give a distinct picture of these two groups. Thus, for most of this report, Two-Star and Three-Star homes are collapsed into one group for description and further analysis. The comparison group, consisting of non-certified homes from the same areas that also accept subsidized children, included a total of 38 homes.

Table 32 lists elements of the structure of the sampled programs that responded, with the first row identifying the percentage of homes in the sample who were licensed, as opposed to registered homes. Among respondent homes, Four-Star homes are significantly more likely to be licensed (80%), as compared to less than half of non-certified homes that also accept subsidized children.¹⁸ In statewide data prior to the pandemic, when the sample was drawn, only 33 percent of homes listed in the CCR were licensed. The data further suggest that Four-Star and Two- or Three-Star homes were no more likely to serve any given age group than were non-certified homes. A large difference was observed, however, in the existence of waitlists for infants. Just under half of Four-Star homes reported a waitlist for infant care, as compared to less than 15 percent of non-certified homes.

¹⁸ Throughout the homes section, all discussion of non-certified homes refers to the comparison group which was also non-accredited and restricted to those homes that were confirmed to serve subsidized children.

Table 32. Elements of Program Structure by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Licensed Child Care Home	43.5%	67.6%	+24.1%	79.6%	+36.1% **
Facility serves infants	51.4%	53.9%	+2.5%	57.4%	+6.0%
Facility serves toddlers	88.4%	80.1%	-8.3%	96.8%	+8.4%
Facility serves preschoolers	83.3%	88.1%	+4.8%	91.1%	+7.8%
Facility serves school-age children	61.1%	75.7%	+14.6%	57.4%	-3.7%
Waitlist: Infants (0-17 months)	14.5%	29.9%	+15.4%	47.6%	+33.1% **
Waitlist: Toddlers (18-35 months)	32.8%	40.9%	+8.1%	35.3%	+2.5%
Waitlist: Preschool (36-71 months)	13.9%	23.7%	+9.8%	12.3%	-1.6%
Waitlist: School age (72+ months)	3.4%	23.7%	+20.3% *	3.7%	+0.3%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Overall Pricing of Quality Care

Among homes, we were unable to determine the incremental price of providing higher-quality child care, beyond the price of providing care that meets state licensing standards. Four-Star homes did not charge more than non-certified homes¹⁹. Similarly, Three-Star homes did not charge more than non-certified homes, but Two-Star homes distinguished themselves by charging less than non-certified homes in an analysis where they were treated as a distinct group. And when Two-Star and Three-Star homes were collapsed into one group, as they are throughout the remainder of this report, they were found to charge significantly less than non-certified homes. Of course, with the sample sizes of homes being smaller than intended, this was not a very powerful test. Still, this result, if confirmed in a larger sample, might call into question some of the assumptions behind the implementation of quality care among homes, particularly at the Two-Star and Three-Star levels.

While disappointing, this finding does not mean that the pricing for quality care in homes is a mystery. On the contrary, we found many factors that are highly correlated with the prices charged by homes, including some general factors discussed here and several structural quality factors discussed in later sections below.

¹⁹ Recall that the non-certified comparison group is restricted to providers that serve subsidized children and who are not nationally accredited.

As discussed earlier for centers, with the wide range of labor markets found in the far-flung geography of Texas, the single best indicator of prices charged for home-based child care is the cost of real estate. Calculator 13 illustrates this finding, showing the results of a model that includes housing costs as well as the age of the child and whether care is provided in a licensed or registered home. Changing the values for 'average single home selling price' reveals fairly wide swings in the price of child care, depending on the area. One can use the lower section of the calculator to look up recent average home selling prices for most counties. The calculator also shows that care in licensed homes is slightly more expensive than care in registered homes.

Again, although the cost of real estate is an important component in the cost of providing child care, this one measure also likely captures a host of related factors associated with a higher cost of living in some areas, including urbanicity, labor costs, and others. This relatively simple statistical model gives surprisingly accurate guidance for how much one might expect to pay for home-based child care in any given area.

Calculator 13. Home Care Pricing based on Local Data

Homes: Calculator based on Local Housing Costs

The following calculator allows you to estimate the baseline price of home childcare by age group and area based on the local cost of single family houses.

Please make the following selections to determine your baseline price.

Step 1: Please enter the average single family home selling price for your area (See LOOKUP*)

\$125,000

Step 3: Please select an interval

Daily

Step 2: Please select an age group

Infant (full day)

Step 4: Please select type of facility

Licensed Child Care Home

Estimating prices for full day care

Baseline daily price for full day care for the Infant age group in areas where single family houses cost around \$125,000

\$19.60 per day

***LOOKUP: Use this to look up the average home selling price in your county:**

Select county: Hays Average price: \$335,000

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

Illustrating another approach to the pricing of child care in homes, Calculator 14 shows selected features of the facility and their relation to prices charged for toddler or preschooler care. This

analysis shows several interesting pricing phenomena. For one, evidence of cross-subsidization of pricing across age groups is suggested by looking at prices charged for the care of toddlers or preschoolers as a function of which other age groups are served by the home. Homes that also serve school-age children charge about ten percent less for toddler or preschooler care than homes that do not, suggesting that caring for school-age children is more profitable and that some of the excess costs of caring for younger children may be offset by an arrangement that involves offering school-age care, typically after-school care, as well. Conversely, homes that also care for infants charge about ten percent more for toddlers and preschoolers than those that do not. The fact that infant care is very expensive is well known, thus this cross-subsidization effect suggests, once again, that the costs of caring for the youngest children are supported in part by also taking care of older children.

Another interesting finding revealed by Calculator 14 indicates that directors of homes that also take care of their own children tend to charge less than homes that do not. This suggests a price can be placed on the value of running a home and taking care of one's own child as an alternative to working outside the home and entrusting them to the care of others. Another way to interpret this is that owners of homes who also take care of their own children may be leaving money on the table by setting their rates too low.

Baseline Child Care Homes Price Calculator based on Facility Features

The following calculator allows you to estimate the baseline price of full day childcare in licensed or registered homes for toddlers or preschoolers based on features of the facility

Please make the following selections to determine your baseline price.

Step 1: Please select an age group

Toddler

Step 2: Please select an interval

Weekly

Step 3: Please select features of facility

Takes care of own child(ren) as well as the children of others	Yes
Home also cares for infants	No
Home also cares for school age children	No

<i>Baseline weekly price for the Toddler age group</i>	\$133 per week
<i>Baseline weekly price among facilities with selected features for full day care for the Toddler age group</i>	\$120 per week
<i>Difference with selected features</i>	-\$14 per week
	-10.5%

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

Staff Education and Experience

The data presented in Table 33 identify similar rates of education, in terms of highest degree earned, among non-certified and Texas Rising Star certified homes. There were significant differences in CDA credential attainment, with both directors and helpers in Four-Star homes being more likely to have attained a CDA credential. Although it is rarely a good idea to try to interpret differences that the statistical test does not identify as significant, there does seem to be a tendency toward lower education levels among Four-Star directors. Perhaps director education level is identifying home directors who temporarily enter the ECE workforce while caring for their own children at home. At any rate, further research should help to establish whether this tendency represents a real finding or simply a product of chance and a small sample.

Directors' reported years of work experience in ECE is high across all program types. Four-Star home directors average over 22 years of experience, nearly five years more than that of non-certified home directors. Home programs also report high rates of experience overall for helper staff, although it

does not vary significantly by Texas Rising Star status. At all Texas Rising Star levels, homes report a greater percentage of helper staff with more than six years of experience than with less than two years of experience in ECE.

Table 33. Staff Education and Experience by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Director					
Highest degree - High school or GED	33.0%	37.7%	+4.7%	48.5%	+15.5% **
Highest degree - Associate	40.9%	49.7%	+8.8%	31.8%	-9.1%
Highest degree - Bachelor's degree or beyond	26.1%	12.6%	-13.5%	19.7%	-6.4% **
Child Development Associate (CDA) Credential	45.5%	41.1%	-4.4%	73.3%	+27.8%
Years of experience working in child care or early childhood education	17.7	19.0	+1.3	22.5	+4.8
Helper					
Highest degree - High school or GED	78.5%	74.5%	-4.0%	45.1%	-33.4% **
Highest degree - Associate	9.0%	25.5%	16.5%	38.7%	29.7%
Highest degree - Bachelor's degree or beyond	12.6%	0.0%	-12.6%	16.3%	3.7% **
Helper has a CDA Credential	0.0%	25.5%	25.5%	38.0%	38.0%
Less than 2 years of experience in ECE	15.7%	0.0%	-15.7%	31.3%	15.6%
More than six years of experience in ECE	59.4%	100.0%	40.6%	43.5%	-15.9%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Calculator 15 presents the most comprehensive analysis of pricing for child care as a function of teacher education and experience. It shows the associations between prices charged for care and the director’s educational background and experience. The education effects are essentially as expected, with care in homes directed by those with an associate’s degree priced higher than that provided by those with a high school diploma or GED, and care provided by those with a bachelor’s degree or above priced even higher. A CDA credential is also associated with higher-priced care.

The relationship between child care pricing and years of experience in Calculator 15 is quite interesting, as it does not conform to a simple linear relationship. Rather, the association is shaped like an inverted U, with the price of care rising with increasing experience but only up to a point. Beyond around fifteen years of director experience, the prices charged start to decline, suggesting that somehow those who stay in the industry the longest are those for whom the low rate of pay is most tolerable.

Calculator 15. Home Care Pricing based on Teacher Education and Experience

Homes: Teacher Education and Experience Calculator

The following calculator allows you to estimate the baseline price of childcare by teacher education and experience levels

Please make the following selections to determine your baseline price.

Step 1: Please select an age group

Infant (full day)

Step 2: Please select an interval

Daily

Step 3: Please select your highest degree of education:

Bachelor's degree or higher
▼

Step 4: Please enter your years of experience in early childhood education

15

Step 5: Do you have a Child Development Associate (CDA) Credential?

No

Baseline daily price for full day care for the infant age group with the selected teacher education and experience

\$29.00 per day

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

Training Related Expenses

Table 34 indicates there are no significant differences in reported training expenses when comparing non-certified to certified homes. All home types report high rates of paying online training fees, ranging from 73 percent of non-certified homes to between 74 and 86 percent of Texas Rising Star certified homes. The high rate of online training fees for certified homes was unexpected, considering

certified homes typically have access to no-cost online training through the Children’s Learning Institute.

Table 34. Training Expenses by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Conference or workshop fees	57.1%	35.9%	-21.2%	51.8%	-5.3%
Online training fees	72.8%	85.6%	+12.8%	74.1%	+1.3%
Onsite training fees	65.1%	57.3%	-7.8%	51.5%	-13.6%
Travel costs for off-site training	34.4%	36.4%	+2.0%	41.4%	+7.0%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Unfortunately, we were unable to design a compelling calculator to illustrate the relationship between prices charged for care and training cost factors. Generally speaking, the most expensive care is offered by homes that report costs for training at conferences, whereas the least expensive care is found among homes that cover online training fees.

Earnings and Benefits

The data presented in the first two rows of Table 35 indicate the extent to which owners’ household income reportedly depends on taking care of children. Although the patterns across groups are difficult to interpret, only one significant difference emerged. Four-Star homes are less likely to report that funds from taking care of children cover almost all or all of their household income, thus indicating lesser economic dependence on their care business. Home providers report minor variations in the number of days the programs are closed for holidays and report very few days of closure for other reasons. The data also identify minor variations across groups in the reported minimum hourly wage providers would accept to motivate them to close their business and enter the paid labor market. This so-called ‘reservation wage’ is commonly studied in the Unemployment Insurance (UI) literature as a measure of what level of incentive would be needed to entice the unemployed to reenter the paid workforce. With average reported reservation wages well over \$21 per hour, it is clear that typical home-based providers are quite committed to their home child care businesses.

Table 35. Earnings and Benefits by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
All household income in 2019 came from taking care of children	60.2%	64.4%	+4.2%	46.6%	-13.6%
Almost all or all household income in 2019 came from taking care of children	80.8%	92.2%	+11.4%	54.6%	-26.2% *
Offer or provide helper with free or reduced-cost childcare	34.2%	0.0%	-34.2%	35.7%	+1.5%
Days per year home closes for personal vacation, summer or any other reasons	1.4	2.6	+1.2	3.1	+1.7 *
Days per year home closes for national, state, or religious holidays	11.9	10.4	-1.5	11.2	-0.7
Minimum hourly wage provider would accept If offered another job that required them to close their home	\$21.46	\$22.22	+\$0.76	\$21.18	-\$0.28

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Staffing Patterns

The data presented in Table 36 suggest that non-certified and Texas Rising Star certified homes report similar group sizes when directors are alone and when they have a helper. Attempts to create a price model calculator using variations of these as proxies for children-per-teacher ratios were unsuccessful. Likewise, similar proportions of homes reported caring for their own children, which ranges from 42 to 49 percent across groups.

Table 36. Staffing Patterns by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Number of children cared for when director has a helper	11.8	11.2	-0.6	11.6	-0.2
Number of children cared for when director is alone	8.6	8.6	0	9.4	+0.8
Director takes care of own children as well as the children of others	48.6%	48.6%	0%	42.3%	-6.3%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at $p < .01$, *= at $p < .05$

Curriculum, Assessment, and Planning Time

In Table 37 the data indicate that while the vast majority of home providers report using a curriculum or prepared set of learning and play activities, this share is significantly higher among Four-Star homes, at 96 percent. The Frog Street curriculum is more commonly used by Texas Rising Star certified providers, regardless of the number of stars they have. The slight tendency toward more formal assessments and fewer informal assessments among certified homes is not statistically significant. Both certified and non-certified homes report providing staff with over six hours a week of paid time to plan class activities.

Table 37. Curriculum, Assessment, and Planning Time by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Home uses a curriculum or prepared set of activities:	78.7%	92.6%	+13.9%	96.3%	+17.6% *
Developed by provider	32.8%	21.9%	-10.9%	18.4%	-14.4%
Creative Curriculum®	4.5%	9.1%	+4.6%	12.3%	+7.8%
Frog street	0.0%	27.8%	+27.8% *	30.1%	+30.1% **
Other	46.0%	53.2%	+7.2%	38.3%	-7.7%
Number of paid hours each week direct care staff are allowed for planning children's activities	7.1	6.3	-0.8	7.0	-0.1
Home uses formal assessments to measure children's developmental progress	44.2%	56.8%	+12.6%	59.6%	+15.4%
Home uses informal assessments to measure children's developmental progress	41.2%	22.6%	-18.6%	34.2%	-7.0%

Source: RMC statistical analysis of the cost of quality data. Note: **=significantly different from non-certified at p<.01, *= at p<.05

Associations between the pricing of child care and curriculum and assessment factors are explored in Calculator 16. In this sample of homes, the most expensive care is offered by homes that report using the Creative Curriculum®, with homes that developed their own curriculum priced almost as high. The least expensive care is found in homes that report using the Frog Street curriculum. The fact that the price of care among Frog Street homes is estimated to be lower than those reporting the use of no curriculum at all is an interesting phenomenon, similar to that observed among centers. Although this relationship could be obscured or distorted by the fact that some local boards provide curricula to Texas Rising Star providers for free, it suggests that curriculum use may be as much about signaling quality to their parent/customers as it is about the cost of the curriculum.

Calculator 16. Home Care Pricing based on Curriculum and Assessment

Homes: Curriculum and Assessment Calculator

The following calculator allows you to estimate the baseline price of full day childcare in registered or licensed homes based on curriculum and assessment factors for toddlers or preschoolers

Please make the following selections to determine your baseline price.

Step 1: Please select an age group

Preschool

Step 2: Please select an interval

Weekly

Step 3: Please select a curriculum

curriculum developed by provider

Step 4: Do you conduct formal assessments?

No

Baseline weekly price for the preschool age group

\$114 per week

Double Click to Activate

Source: RMC statistical analysis of the cost of quality data.

CENTERS FOLLOW-UP SURVEY

The follow-up survey for centers was administered approximately one year after the initial wave of the CQS by calling all centers included in the initial CQS sample, regardless of whether they responded to the initial wave. The follow-up survey instrument was an abbreviated version of the CQS which included the questions from the Market Rate Survey plus the ratio and staff experience questions from the initial wave of the CQS. Additionally, a new set of questions was added to gather information on the impact of COVID-19 (See Appendix B for the new questions).

PARTICIPATION

The CQS center follow-up survey received 985 complete responses in total. The overall response rate among centers judged to be eligible was 65.5 percent, about 12 percentage points higher than the response rate for the initial wave of the CQS, but comparable to prior years of the MRS. The lower response to the first wave of the CQS was likely due to it being fielded at the very beginning of the COVID-19 pandemic. Although both waves of the center CQS showed decent response rates when considered individually, the overlap between the groups of respondents was less than expected. Only 599 of the eligible centers (42.2%) responded to both the initial and follow-up waves of the survey.

In looking at factors related to whether centers responded to the follow-up CQS, several similarities to the first wave CQS were noted. First, higher-quality centers were almost 12 percentage points more likely to respond to the follow-up survey, relative to the non-certified and non-accredited comparison groups. This tendency is even stronger than in the initial wave of the CQS. In addition, centers that were confirmed to have served subsidized children in the months before the sample was drawn were 7 percentage points more likely to respond, a typical finding in the recent history of the market rate survey.

Finally, an examination of local COVID-19 case growth rates in relation to survey completion rates showed a similar pattern to before, in which centers were once again less likely to respond in the presence of high COVID-19 case growth rates. As before, we determined that local confirmed COVID-19 case count growth rates around 8 to 14 days before we made the last call to a facility were most strongly predictive of whether that facility responded to the survey. Among centers in the follow-up survey, 57 to 61 percent of eligible facilities completed the survey when their county COVID-19 case growth rate was low or moderate, but this fell to 51 percent when local COVID-19 case growth rates were high. A detailed non-response model was utilized to adjust for any biases introduced by non-response that may have been due to COVID-19 or other factors.

OVERALL PRICE OF QUALITY CARE, 2021

In this section, we examine the overall pricing of quality care in 2021, after about a year of cumulative pandemic-induced stresses on the Texas child care market. This 2021 pricing analysis represents the first replication of the quality pricing model developed using 2020 responses and extensively described earlier in this report. The calculators below also allow a comparison of these 2021 rates with similar rates estimated for 2020.

Accreditation

The first 2021 calculator, like Calculator 2 earlier, looks at the incremental price of providing accredited child care as compared to the price of providing care that meets state licensing standards, for all age groups and for any chosen combination of geographical area and time interval.

Calculator 17 estimates monthly, weekly, or daily prices of accredited care for four age groups, and for the entire state of Texas or one of the various metropolitan areas or non-metro areas of the state. The calculator also estimates the incremental price of accreditation in either dollar terms or in percent of the baseline daily price of non-accredited facilities it represents. As before, prices reported for the care of school-age children represent afterschool or part-day prices for this age group, whereas rates presented for all other age groups are full-day rates.

Calculator 17 shows that in 2021, accredited child care is priced around 20 percent or more above the price of non-accredited care in the most expensive urban areas of the state, and 30 percent or more for school-age children. In less populous areas, the premium for accreditation is higher, typically 25 percent or more for younger children, and 40 percent or more for school-age children. In all cases, these numbers fall into similar patterns as the 2020 prices, which can be observed by using the pull-down tab to select 2020 or 2021 pricing. However, the price differentials are larger in 2021 than those reported for 2020, meaning that the estimated incremental price of providing accredited care has increased. To what extent this price increase reflects actual increases in costs or something particular to providing child care in the second year of a pandemic is still open to interpretation.

Centers: Multi-year Accreditation Price Calculator based on Area, all Ages

The following calculator allows you to estimate the baseline price of childcare by accreditation status and age group based on your area.

Please make the following selections to determine your baseline price.

Double Click to Activate

Step 1: Please select an area

Houston

Step 2: Please select an interval

Monthly

Step 3: Please select a year

2020

Houston area		Baseline monthly price	Percent Premium for Accreditation
Infant, full day	<i>Non-Accredited</i>	\$942 per month	
	<i>Accredited</i>	\$1103 per month	17.0%
Toddler, full day	<i>Non-Accredited</i>	\$844 per month	
	<i>Accredited</i>	\$996 per month	18.0%
Preschool, full day	<i>Non-Accredited</i>	\$755 per month	
	<i>Accredited</i>	\$899 per month	19.1%
School age, afterschool	<i>Non-Accredited</i>	\$399 per month	
	<i>Accredited</i>	\$506 per month	26.7%

Source: RMC statistical analysis of the cost of quality follow-up data.

Texas Rising Star

Like before, estimation of the pricing of care at varying levels of Texas Rising Star certification focuses only on centers that accept subsidies, with Two- and Three-Star facilities collapsed into one category. In a nice replication of statewide 2020 findings, Texas Rising Star certified care at the Four-Star level in 2021 is estimated to be priced 22 to 25 percent more than non-certified care for infants, toddlers, and preschoolers, and 35 percent more for school-aged children. These price differentials are similar but slightly larger than those seen in 2020. However, Texas Rising Star certified care at the Two- or Three-Star level was found to be priced at essentially the same level as non-certified care, with the difference not being statistically significant. Because this latter result can cause the display of odd values for statewide price differentials, the statewide estimation function of Calculator 18 has been disabled. Note that in future iterations of this Cost of Quality Price Modeling Report, there will be no non-Texas Rising Star Certified providers serving subsidized children, so the comparison group will have to be redesigned.²⁰

Calculator 18 does present estimates for the incremental price of Texas Rising Star certified care for any major metropolitan, micropolitan, or rural areas of the state. As seen throughout this study, child care is far more expensive in major metropolitan areas and least expensive in micropolitan or rural areas. Again, we have no evidence that the incremental price associated with Texas Rising Star certification varies geographically. In this regional model, Texas Rising Star certified care at the Two- or Three-Star level was found to be priced around 1 to 3 percent above non-certified care, well below the 5 to 7 percent seen in 2020 data. Similarly, the regional model shows Texas Rising Star certified care at the Four-Star level in 2021 to be priced 19 to 28 percent higher than non-certified care for infants, toddlers, and preschoolers, and 28 to 44 percent higher for school-aged children.

²⁰ In 2021, the Texas legislature enacted legislation that requires all providers in TWC's Child Care Services subsidy program to participate in Texas Rising Star. TWC is currently implementing this new requirement through modifications to TWC's administrative rules and will be moving toward a mandatory Texas Rising Star program for the Child Care Services program.

Centers: Multi-year Texas Rising Star Certification Price Calculator based on Area and Age

The following calculator allows you to estimate the baseline price of childcare by Texas Rising Star (TRS) certification level based on your area and age group.

Please make the following selections to determine your baseline price.

Double Click to Activate

Step 1: Please select an area

Ft Worth

Step 3: Please select an interval

Monthly

Step 2: Please select an age group

School (afterschool)

Step 4: Please select a year

2020

Estimating price for afterschool care

<i>School (afterschool) age group in the Ft Worth area</i>	<i>Baseline monthly price</i>	<i>Percent Premium for TRS Certification</i>
<i>Non-certified centers</i>	\$375 per month	
<i>TRS 2 or 3 Star centers</i>	\$408 per month	8.8%
<i>TRS 4 Star centers</i>	\$475 per month	26.7%

Source: RMC statistical analysis of the cost of quality follow-up data.

RESPONSE TO COVID-19

In this section, we analyze centers’ responses to the questions on the impact of COVID-19, which were added to the follow-up survey. We focus specifically on whether higher-quality centers differed from non-accredited and non-certified centers in their experience of the pandemic and its effects on their operations.

Table 38 and Table 39 show providers’ reported receipt of special COVID-19 supports by accreditation and by Texas Rising Star status. Roughly half of all providers report receiving a Paycheck Protection Program (PPP) loan from the Small Business Administration (SBA), making it one of the most popular of the special COVID-19 supports. Higher quality providers were no more likely to report receiving such a loan. These PPP loans were designed to be forgiven, or not required to be repaid, under certain circumstances, including when the funds were used to maintain staffing and compensation levels. As indicated in the tables, both accredited and Texas Rising Star Four-Star

certified providers were more likely to report that they did not expect to have to repay their PPP loans, perhaps indicating a better understanding of how to navigate this benefit to their advantage.

Table 38. Special COVID-19 Related Supports by Accreditation

	Non-Accredited	Accredited	Accreditation Difference
Received a Paycheck Protection Program (PPP) loan from the Small Business Administration (SBA)	51.9%	43.9%	-8.0%
Do you expect to have to pay back your PPP loan?	12.5%	1.4%	-11.1% *
Received rent or mortgage payment deferrals	1.7%	2.7%	+1.0%
Received enhanced reimbursement rates from TWC	7.9%	20.4%	+12.5% **
Received funds for minor program modifications to meet safety guidelines	1.7%	1.7%	0%
Received other grants	3.9%	4.4%	+0.5%
Received other loans	1.5%	0.9%	-0.6%
Have you received any donations related to COVID-19 such as PPE or cleaning supplies?	56.7%	61.9%	+5.2%

Source: RMC statistical analysis of the cost of quality follow-up data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

The most common of the special supports that centers reported receiving was donations of personal protective equipment (PPE) or cleaning supplies. Over half of providers received such donations but accredited and Texas Rising Star Certified providers were no more or less likely to report receiving this support. The next most common COVID-19 support reported was enhanced reimbursement rates for the care of subsidized children. No other special supports were more frequently reported by accredited or certified providers.

Table 39. Special COVID-19 Related Supports by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Received a Paycheck Protection Program (PPP) loan from the Small Business Administration (SBA)	48.2%	52.4%	+4.2%	52.7%	+4.5%
Do you expect to have to pay back your PPP loan?	12.2%	3.5%	-8.7%	2.6%	-9.6% *
Received rent or mortgage payment deferrals	1.5%	2.5%	+1.0%	4.8%	+3.3%
Received funds for minor program modifications to meet safety guidelines	1.4%	0.1%	-1.3%	2.6%	+1.2%
Received other grants	3.4%	1.8%	-1.6%	7.0%	+3.6%
Received other loans	1.9%	0.0%	-1.9%	2.9%	+1.0%
Have you received any donations related to COVID-19 such as PPE or cleaning supplies?	62.3%	64.7%	+2.4%	65.7%	+3.4%

Source: RMC statistical analysis of the cost of quality follow-up data. Note: **=significantly different from non-certified at p<.01, *= at p<.05. Texas Rising Star certified centers may also have national accreditation.

Providers' general responses to the COVID-19 pandemic are shown in Table 40 and Table 41. About a quarter of centers reported having to lay off staff, and over half reported having staff quit or retire early due to the pandemic. These staffing strategies were not more common among accredited providers, but Texas Rising Star Four-Star providers were more likely than non-certified providers to report layoffs and quits or early retirements.

Table 40. Staffing, Closure, and Rate Increases by Accreditation

	Non-Accredited	Accredited	Accreditation Difference
Have you had to lay off staff due to COVID-19?	21.0%	26.9%	+5.9%
Have any of your staff quit or retired early due to COVID-19?	51.6%	56.6%	+5.0%
Have you closed your facility or stopped serving children for any period of time due to COVID-19?	48.7%	57.0%	+8.3%
Number of weeks facility closed or stopped serving children due to COVID-19	5.4	4.1	-1.3
Have you had to raise your regular rates to make up for these additional costs?	16.3%	16.3%	0%

Source: RMC statistical analysis of the cost of quality follow-up data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Having closed their facility or stopped serving children for any period of time due to COVID-19 was quite common, reported by about half of centers. Typically, among those that closed, the closure lasted for about four to five weeks. And about one in six providers reported raising their rates in response to increased costs related to COVID-19. None of these responses were more or less common among higher-quality providers.

Table 41. Staffing, Closure, and Rate Increases by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Have you had to lay off staff due to COVID-19?	15.7%	19.0%	+3.3%	25.5%	+9.8% *
Have any of your staff quit or retired early due to COVID-19?	46.1%	49.5%	+3.4%	59.9%	+13.8% *
Have you closed your facility or stopped serving children for any period of time due to COVID-19?	47.4%	53.2%	+5.8%	57.9%	+10.5%
Number of weeks facility closed or stopped serving children due to COVID-19	4.5	3.7	-0.8	4.4	-0.1
Have you had to raise your regular rates to make up for these additional costs?	16.7%	9.3%	-7.4%	21.7%	+5.0%

Source: RMC statistical analysis of the cost of quality follow-up data. Note: **=significantly different from non-certified at p<.01, *= at p<.05. Texas Rising Star certified centers may also have national accreditation.

Centers' reported changes in their capacity to serve children due to COVID-19 are shown in Table 42 and Table 43. The survey gave providers four response options for these questions, including 'increased,' 'stayed about the same,' 'decreased,' or 'stopped altogether.' Because very few providers reported 'increased' capacity or having 'stopped altogether,' we simplified these measures by consolidating the 'decreased' and 'stopped altogether' responses.

Table 42. Capacity to Serve Children by Accreditation

	Non-Accredited	Accredited	Accreditation Difference
Capacity to serve children decreased or stopped altogether due to COVID-19	74.5%	69.8%	-4.7%
Number of infants cared for decreased or stopped altogether since COVID-19	56.2%	60.4%	+4.2%
Number of toddlers cared for decreased or stopped altogether since COVID-19	62.3%	62.8%	+0.5%
Number of preschoolers cared for decreased or stopped altogether since COVID-19	69.8%	69.2%	-0.6%
Number of school-age children cared for decreased or stopped altogether since COVID-19	65.5%	64.1%	-1.4%

Source: RMC statistical analysis of the cost of quality follow-up data. Note: **=significantly different from non-accredited at $p < .01$, *= at $p < .05$

Roughly two-thirds of providers reported serving decreased numbers or stopping altogether, both for given age groups or overall. Higher quality providers were no more or less likely to report using this strategy.

Table 43. Capacity to Serve Children by Texas Rising Star

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Capacity to serve children decreased or stopped altogether due to COVID-19	75.3%	76.4%	+1.1%	73.3%	-2.0%
Number of infants cared for decreased or stopped altogether since COVID-19	57.0%	71.4%	+14.4% *	65.0%	+8.0%
Number of toddlers cared for decreased or stopped altogether since COVID-19	62.9%	62.8%	-0.1%	65.3%	+2.4%
Number of preschoolers cared for decreased or stopped altogether since COVID-19	68.9%	72.2%	+3.3%	72.7%	+3.8%
Number of school-age children cared for decreased or stopped altogether since COVID-19	66.5%	68.8%	+2.3%	71.3%	+4.8%

Source: RMC statistical analysis of the cost of quality follow-up data. Note: **=significantly different from non-certified at $p < .01$, * = at $p < .05$. Texas Rising Star certified centers may also have national accreditation.

Since the follow-up wave of the CQS included only a subset of the quality questions, it is not possible to replicate many of the analyses focused on estimating the pricing of quality-related program elements. Other types of analyses become possible, however, with repeated observations of the same providers at different points in time. In particular, we can examine these repeated measurements to gain insight into how providers continued to respond to pandemic conditions in order to provide their essential child care service.

OPERATIONAL CHANGES

In this section, we analyze changes that centers made to their operations, many of which represent structural quality factors, but all of which help to shed some light on responses to operating during a pandemic. To ensure that we are capturing actual changes in operations, and not just shifts in the types of centers responding to the survey, this analysis is limited to the 599 centers that responded to both the initial 2020 and follow-up 2021 waves of the CQS.

Figures in Table 44 illustrate changes in staffing and ratios reported by centers between their first response, during the early months of the pandemic, and their second response a year or more later. Centers responding to both waves of the survey reported three fewer direct care staff members, on average, than they had earlier, a 16 percent reduction in direct care staffing. And perhaps not surprising given the pandemic, reduced children per teacher ratios were seen in all age groups, but the reductions were proportionally larger among older children. Reductions in teachers per classroom were also seen among infants and toddler classrooms, but the differences were not statistically significant among older children.

Table 44. Changes in Staffing

	2020 Survey	2021 Survey	Change Over Time	
How many direct care staff work at your center?	18.8	15.7	-3.1	**
Staff with 6 or more years of experience working in ECE	45.1%	47.1%	+2.0%	
Staff with less than two years of experience working in ECE	26.4%	25.4%	-1.0%	
Children per teacher ratio, infants	4.4	4.2	-0.2	**
Children per teacher ratio, toddlers	7.9	7.4	-0.5	**
Children per teacher ratio, preschoolers	12.9	11.7	-1.2	**
Children per teacher ratio, school age	17.8	15.4	-2.4	**
Teachers per classroom ratio, infants	2.0	1.9	-0.1	**
Teachers per classroom ratio, toddlers	1.8	1.7	-0.1	**
Teachers per classroom ratio, preschoolers	1.6	1.5	-0.1	
Teachers per classroom ratio, school age	1.7	1.6	-0.1	

Source: RMC statistical analysis of the cost of quality data. Note: **=2021 measure significantly different from 2020 measure at $p<.01$, *= at $p<.05$

Changes in program structure between waves of the CQS are shown in Table 45. By the time of their second response, well into the pandemic, significantly fewer centers reported serving preschool-aged children. Waitlist data suggest that there was still significant demand for preschool care, as the number of centers reporting a waitlist for preschool care increased by over eight percentage points. Waitlists also became more common for school-age care during this interval, but in absolute terms, infant care is still the scarcest, with about half of facilities reporting a waitlist for full-time infants.

Table 45. Changes in Program Structure

	2020 Survey	2021 Survey	Change Over Time
Center serves infants	99.3%	98.7%	-0.6%
Center serves toddlers	99.8%	98.9%	-0.9%
Center serves preschoolers	98.5%	96.2%	-2.3% *
Center serves school age children	94.2%	92.5%	-1.7%
Waitlist exists, full-time infants	51.4%	48.5%	-2.9%
Waitlist exists, full-time toddlers	36.4%	34.9%	-1.5%
Waitlist exists, full-time preschoolers	17.6%	26.0%	+8.4% **
Waitlist exists, part-time school age	12.3%	17.6%	+5.3% *

Source: RMC statistical analysis of the cost of quality data. Note: **=2021 measure significantly different from 2020 measure at $p < .01$, *= at $p < .05$

We did further analysis to determine whether any of these reported changes over time varied between accredited and non-accredited facilities, in what is known as statistical interaction effects. We found that accredited facilities reported losing more direct care staff than non-accredited facilities. Accredited facilities have larger staffs overall, with around ten more staff members per facility, but they tended to lose more than non-accredited providers, both in number and percentage terms.

We also found that the effect indicating centers reportedly served fewer preschool children varied by accreditation. Non-accredited providers were substantially less likely to serve preschoolers in the follow-up wave, but accredited providers were just as likely to serve this age group at both points in time.

RESILIENCE: CONTINUING TO PROVIDE CARE IN A PANDEMIC

The continued availability of child care became critical during the pandemic, particularly for essential workers. Additional health and safety regulations impacted group sizes, hygiene protocols, and sanitization procedures in child care centers, all requiring additional expense and staff time. TWC began in early March 2020 to implement supports to stabilize the segment of the Texas child care industry contracted to provide subsidized care. In this section, we are thinking of child care providers in terms of their resilience in the face of whatever the pandemic throws at them, including among other things loss of staff and reduced revenue due to declining enrollment.

This section measures the continued availability of child care using a proxy to assess whether providers remain licensed or registered to provide care. This measure uses public records from the Child Care Regulation (CCR) database to determine at various points in time which facilities from the original sample were still permitted to provide care. Texas HHS Minimum Standards for Licensed Child Care Centers and Homes (2018 & 2021) require programs to provide prior written notification to HHS

CCR regarding a closure for five consecutive days or more, or if they are going out of business (HHS, 2021). In addition, providers are required to report any changes in the age range of children to be cared for as well as changes to the hours, days, or months of operation. Further, providers must notify HHS CCR as soon as possible, but no later than two days after any occurrence that renders all or part of a center unsafe or unsanitary for a child. Early on during the pandemic, closures both temporary and permanent were happening quickly and there may have been a lag time during this period in the reporting of temporary and permanent closures, as well as changes to services provided that would have influenced what the researchers were seeing in the data. The primary advantage of using CCR data to measure closure is that it is available for all centers in the sample, whereas the closure items in the follow-up survey (Table 40 and Table 41) can only describe the experience of those who were open at the time and responded.

We used seven snapshots of the CCR database taken between May 21st, 2020, about eight months after the sample was drawn, and January 21st, 2022, about twenty-eight months after. The question we asked of this data was whether higher-quality providers were more likely to remain open throughout the pandemic, according to this measure, as compared to non-accredited and non-certified providers. Table 46 clearly shows that yes, at most points in time, accredited providers were significantly more likely to remain open, compared to non-accredited providers. Similarly, Table 47 shows that Four-Star Texas Rising Star providers were significantly more likely to remain open at all points in time, and Two- and Three-Star providers were more likely to remain open through the twelve-month follow-up, relative to the non-certified comparison group.

Table 46. Remained Licensed or Registered, Accredited vs Non-Accredited

	Non-Accredited	Accredited	Accreditation Difference	
Registered at 8-month follow up	62.7%	79.6%	+16.9%	**
Registered at 12-month follow up	77.2%	88.5%	+11.3%	**
Registered at 20-month follow up	82.9%	88.9%	+6.0%	
Registered at 24-month follow up	81.2%	91.2%	+10.0%	**
Registered at 28-month follow up	79.0%	87.7%	+8.7%	*
Continuously registered at all follow up dates	51.1%	68.7%	+17.6%	**

Source: RMC statistical analysis of the cost of quality and CCR data. Note: **=significantly different from non-accredited at p<.01, *= at p<.05

Although the patterns over time are interesting, to explore this further we simplified this measure to discover which providers appeared to remain open the entire time²¹. Both tables also have a final row with a measure that indicates whether providers were continuously registered on all seven of

²¹ As a technical matter we cannot say with certainty that providers remained open the entire time, but only that we have no evidence that they were closed on any of the seven dates we checked.

the follow-up dates. Overall, about 65 percent of centers were continuously registered. And once again, the patterns on this measure are strongly in favor of accredited and Four-Star facilities being most likely to remain open, with slightly weaker effects for Two- and Three-Star providers.

Table 47. Remained Licensed or Registered, Non-Certified vs Texas Rising Star Level

	Non-Certified	Texas Rising Star 2- or 3-Star	2- or 3-Star Difference	Texas Rising Star 4-Star	4-Star Difference
Registered at 8-month follow-up	65.6%	78.0%	+12.4% **	85.8%	+20.2% **
Registered at 12-month follow-up	76.4%	84.1%	+7.7% *	93.4%	+17.0% **
Registered at 20-month follow-up	82.2%	84.4%	+2.2%	89.8%	+7.6% *
Registered at 24-month follow-up	80.8%	84.5%	+3.7%	89.5%	+8.7% **
Registered at 28-month follow-up	78.4%	83.2%	+4.8%	88.2%	+9.8% **
Continuously registered at all follow-up dates	52.4%	57.7%	+5.3%	73.6%	+21.2% **

Source: RMC statistical analysis of the cost of quality and CCR data. Note: **=significantly different from non-accredited at $p < .01$, *= at $p < .05$. Texas Rising Star certified centers may also have national accreditation.

In response to the findings indicating higher quality providers were more likely to remain open during the pandemic, some might ask whether facilities had to reduce their quality in order to remain open. But evidence from the follow-up survey noted in Table 44 suggests that overall, children per teacher ratios were actually lower in 2021 as compared to 2020.

DISCUSSION

The current ECE model of quality care positions the various components of ECE structural quality, the environment, teacher education, training and experience, and other structural factors as the supports of process quality: the child's daily experiences and relationships with caregivers and other children. Structural quality factors can be more readily measured by objective indicators and are subject to policy regulations and funding decisions. This report examined several structural quality components for child care centers, including staffing ratios and staff turnover; staff education and experience; staff training expenses; earnings and benefits; and curriculum, assessment, and staff planning time. Some of these factors were also assessed for homes. Comparisons were made between nationally accredited and non-accredited centers, Texas Rising Star certified centers and non-certified centers, and Texas Rising Star certified homes and non-certified homes. The same structural quality components were also studied as factors in *price* models, which in many cases were found to provide good estimates of the marginal *cost* to providers of increasing quality along these dimensions.

The empirical approach utilized throughout this study differs from some recommendations in the child care cost literature in that this study attempted to estimate costs of providing care based on extensive modeling of prices charged rather than the balance sheets of facilities. Consider this analogy: Say you want to know what houses cost in your neighborhood. Do you look at the asking prices of all the houses currently for sale? Or do you look only at the ones that have sold? Only one of these numbers is grounded in the reality of a market-based economy. Similarly, with the market for child care, we argue that the empirical approach this study employed provides good estimates of costs because all the rates gathered were subject to market forces. Those facilities that are not recuperating their costs through a combination of prices charged for care plus external supports (which we measure and control statistically) cannot survive in the market indefinitely. We tried to use the term 'cost' throughout this paper to refer to the overarching concept we are studying, and the term 'price' when referring to estimates arising from the data.

Key findings

Some of the most robust findings reported here are on the overall price of providing quality child care in licensed child care centers, relative to care that merely meets state licensing standards. The 2020 calculators consistently show that care from nationally accredited centers is priced 20 to 25 percent more than care from non-accredited, non-certified centers that meet licensing standards. Follow-up survey data replicated this finding in 2021 data. Similarly, among center providers that accept subsidies, care provided at Four-Star facilities is routinely priced at about 18 to 22 percent more than care at non-certified, non-accredited facilities in 2020. Again, the follow-up survey replicated this finding with a slightly larger estimated price differential of 22 to 25 percent in 2021.

Perhaps the most impressive finding from the follow-up survey and analysis is the high degree of resilience shown by higher quality facilities. Accredited and Four-Star Texas Rising Star centers were much more likely to remain open at most follow-up dates than lower-quality providers.

The follow-up survey revealed interesting patterns in children per teacher ratios. As may be expected during a pandemic, with reduced enrollments and potentially increased space requirements,

children per teacher ratios generally declined between the 2020 and 2021 surveys. In structural quality terms, this should be a good thing, but it is not clear that these centers weren't hurt fiscally.

In the analysis of wage levels, data from the first wave CQS indicate that higher-quality providers tended to both pay higher wages and provide better benefits. In many ways, however, examination of providers' responses to the COVID-19 pandemic showed that higher-quality centers did not respond differently than other providers, despite the finding that higher-quality providers were more likely to remain open as determined by CCR data. The most common supports providers reported receiving were donations of PPE and cleaning supplies, and receipt of a PPP loan from the SBA. Higher quality providers were no more likely to receive these supports but were more likely to report that they did not expect to have to repay the loan. They were also more likely to report receiving enhanced reimbursement rates for providing subsidized care. And Four-Star Texas Rising Star providers were more likely to report having to lay off staff or having staff quit or retire due to COVID-19.

The number of licensed and registered homes responding to the survey was lower than expected and hence the statistical power of this study to shed light on the pricing of quality among homes is low.²² In addition, due to the homes survey being fielded during some of the worst weeks of the pandemic as it was experienced in Texas, and the reduced response rates that followed, our ability to generalize these findings to all homes is somewhat reduced. In fact, we are not able to identify a fair pricing differential for Texas Rising Star certified homes, relative to non-certified homes, without further study. Still, this first known study of home-based child care pricing factors should be considered a success, and several findings are notable.

For one thing, home directors have a tremendous amount of experience in ECE, over 22 years on average for Four-Star homes. Well over half of homes report that child care is responsible for almost all or all of their household income. Although we did not ask for their rate of pay, since most directors do not formally pay themselves, any calculation of their actual rate of pay after expenses would arguably reveal a low number. And yet, as a group, these directors exhibit a very high rate of commitment to their homes, as evidenced by their responses to the 'reservation wage' question. When asked what rate of pay it would take for them to close their homes and accept outside employment, they responded with an average of over \$21 or \$22 per hour. Finally, while almost half of homes report taking care of their own child as well as others' children, one pricing calculator (Calculator 14) shows that directors in this situation may not be charging as much as they could (a 10% deficit). Taken together, this constellation of findings suggests that home directors on average tend to value other aspects of their work more than just the economic benefits of caring for children in their home. Sadly, as of this writing almost twenty percent of registered homes have apparently closed since the start of the pandemic.

²² The term low statistical power implies a low probability of finding a statistically significant difference in cases where a difference does, in fact, exist.

Policy Options

Overall, the evidence reported here is consistent with a policy of significantly increasing reimbursement rates for child care provided by Texas Rising Star Four-Star centers. As of this writing, TWC has recently done just that by increasing the maximum Four-Star reimbursement to at least the 75th percentile of market rates²³. Closing this gap should both serve to reward centers for achieving Four-Star certification with a reimbursement that better matches the cost of providing quality care, as well as incentivize Two- and Three-Star certified centers to increase the quality of care they offer to reach the Four-Star level. It could also reduce the segmentation of the Texas child care market based on those who do and do not provide care for subsidized children. Evidence on Two-Star and Three-Star providers suggests that the 5 percent to 7 percent premium presently used as pricing guidance in some areas is fair.

The geographic model that underlies county-level estimates of the price of non-accredited and accredited care (see Calculator 3 and Calculator 6) shows great potential for leveraging existing data to estimate the pricing of child care in a more localized manner. In recent years the authors of the annual Texas Market Rate Survey (MRS) have fielded requests from policymakers and researchers in the largest metropolitan areas of the state who are keenly interested in knowing the price or cost of child care at the county, zip code, or even Census tract level if possible. It could be quite an expensive option to add an oversample of facilities in these large metro areas to either the annual MRS or to future iterations of a Cost of Quality Price Modeling Report. On the other hand, the combination of sampling at current rates plus modeling may be able to provide accurate estimates in smaller areas much more cost-effectively. Continued refinement of this approach, including the potential addition of existing microdata from the MRS and other public data, could improve these models significantly. And better, more granular estimation at the local level could open the door for more accurate targeting of limited child care funds, particularly when inflation and a higher cost of living complicate the task of hiring and retaining workers.

As discussed earlier in this report, many Workforce Development Boards in Texas provide Texas Rising Star certified programs with ECE curricula at no cost, another potential cost savings associated with Texas Rising Star certification. According to the survey, among the well over 90 percent of accredited or Texas Rising Star certified facilities that reported the use of a curriculum, two-thirds or more used a commercially available one. And four-fifths or more of certified homes reported using a commercially available curriculum. Depending on their local board policies, certified centers and homes may have access to a commercially available curriculum at no cost through their local Workforce Development Board. On the other hand, 50 percent of non-certified homes and 58 percent of non-certified centers report using a commercially available curriculum, which no doubt comes with a cost.²⁴ This area could represent a potential cost savings for these programs, and perhaps one among many incentives to join Texas Rising Star.

²³ These reimbursement rates were increased to the 80th percentile for toddlers and 85th percentile for infants.

²⁴ These findings may be influenced by the low number of homes that participated in the study.

The surveys for this report were constructed prior to the COVID-19 pandemic. In many communities across the country, the decision to deliver education, training, and support services on virtual platforms in response to the pandemic revealed inequities in access to the internet and adequacy of computing devices. The pandemic highlighted the disparities across the state of Texas for both rural and urban areas in access to dependable internet service, computer equipment, and technical support.

The public policy nonprofit Texas 2036 reports that approximately 1 million rural Texans lack broadband infrastructure, and more than 3 million urban-area households do not subscribe to available high-speed internet. The extent to which this digital divide impacts the quality of child care across the state of Texas is unknown. However, survey responses indicated that significant fractions of homes and centers did report having online training expenses, and further evidence showed the least expensive care among homes is found in homes that cover online training fees. It is not clear for programs that did not identify this expense whether they are accessing online training at no cost, or are unable to access online training resources due to lack of broadband access. As state lawmakers seek legislative solutions, questions regarding how the digital divide influences child care providers' access to online training and other online community supports warrant further exploration to guide policy decisions and quality funding distribution decisions by Workforce Boards across the state.

This study evaluated the receipt of external supports, financial donations or reduced-cost services, and reports that 57 percent of Texas Rising Star certified centers and 65 percent of non-certified centers receive support through the Child and Adult Care Food Program (CACFP), a federal program that provides reimbursements for nutritious meals and snacks to eligible children who are enrolled for care at participating centers. Often, meals and snacks served to children are included in the cost of services, but child care facilities participating in CACFP receive funds from the federal government to provide meals and snacks, a savings estimated to be associated with a reduction in the daily cost of care of between ten and twenty percent. Any comprehensive effort to improve child care quality while controlling costs should include the goal of encouraging greater take-up of this program. The Child Food Program of Texas²⁵ is available to function as a sponsoring organization to facilitate participation in the CACFP by providing administrative and other supports for licensed centers and homes, and registered homes. Facilities should be encouraged to evaluate how the Child Food Program of Texas can assist in determining the potential cost savings available to them along with an understanding of the advantage of the available administrative supports.

This report identified a need for infant care, clearly the most expensive age group to provide care for, and in particular, a demand for high-quality infant care, as evidenced by the waitlists. Data presented here point to a pricing strategy that may help to keep infant care somewhat affordable, by spreading the costs to parents of older children. Evidence from the calculators shows that facilities providing infant care rely on such cross-subsidization of pricing across age groups. Facilities serving infants charge higher rates for toddlers and preschoolers than those that do not serve infants. Further, the analysis of homes pricing indicates that homes serving school-age children charge about ten

²⁵ For additional information on the Child Food Program of Texas, see <http://childfoodprogramoftexas.org/about-the-cacfp.html>

percent less for toddler or preschooler care than homes that do not, suggesting that caring for school-age children is more profitable and that some of the excess costs of caring for younger children may be offset by an arrangement that involves offering school-age care, typically after-school care, as well. Providers should be made aware of this pricing strategy in an effort to increase the availability and affordability of infant care across the state.

Further study

While this Cost of Quality Price Modeling Report has uncovered some impressive findings, significant work remains to be done. First and foremost, the survey should be fielded to a new sample, with some tweaks, after the child care market has had a chance to stabilize and to some extent recover from the COVID-19 pandemic and the dramatic upheavals it brought to the industry. Although we used a non-response model to correct any bias, this approach has limitations, and it is not even clear what the market will look like given that over 1500 providers that were open for business when the sample was drawn in late 2019 are still closed as of this writing, according to Child Care Regulation data. A larger home sample will be needed, and in both centers and homes, Two-Star and Three-Star facilities will need to be oversampled to ensure we can get a clear picture of the pricing of quality at these certification levels. Pricing will also need to be estimated for different age bands than those used here, in order to accommodate a larger number of age groups as mandated by recent legislation (SB 1555, 87th legislative session, signed by Governor on 5/18/2021).

Another way the next iteration of this survey can be improved is by surveying local Boards to get a better handle on which supports they offered Texas Rising Star providers in their areas. Recall that quality improvement supports provided might include curricula and other materials and equipment, no-cost professional development, and on-site mentoring. The offer of a free curriculum, for example, may have confounded our price model, particularly given that different boards appear to have offered different curricula. But if we know which ones were made available for free in which locations, the price model could account for it.

Finally, a potential next iteration of this study could include a small validation study, in which 40 or so respondents to the center survey would be recruited for an in-depth examination of their costs, along the lines of the traditional cost study. This would allow the assumptions of the empirical approach we use here to be tested against the more commonly applied, but labor-intensive, approach to estimating the cost of providing child care. Importantly, this validation study would not be used to account for geographical variation, as it would be prohibitively expensive to implement with a statewide random sample. Rather, it could be done for a handful of urban, micropolitan, and rural centers in a convenient location. Importantly, this approach could be used as a check on whether the empirical price modeling approach is missing any important details.

SOURCES

- Ainsworth, M. S. (1989). Attachments beyond infancy. *American Psychologist*, 44, 709–716.
<https://doi.org/10.1037/0003-066X.44.4.709>
- The Annie E. Casey Foundation. (n.d.). *Kids count data center*. Retrieved January 2021, from
<https://datacenter.kidscount.org>
- Belfield, C., & Schwartz, H. (2007). *The cost of high-quality pre-school education in New Jersey*. Education Law Center.
https://edlawcenter.org/assets/files/pdfs/publications/Cost_of_Preschool_in_NJ_2007.pdf
- Blasberg, A., Bromer, J., Nugent, C., Porter, T., Shivers, E., Tonyan, H., Tout, T., & Weber, B. (2019). *A conceptual model for quality home-based care*. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
https://www.acf.hhs.gov/sites/default/files/documents/opre/ccepra_hbcc_conceptual_model_508b.pdf
- Blau, D.M., & Mocan, H.N. (2002). The supply of quality in child care centers. *The Review of Economics and Statistics*, 84(3), 483–496.
https://econpapers.repec.org/article/tprrestat/v_3a84_3ay_3a2002_3ai_3a3_3ap_3a483-496.htm
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner (Ed.), *Handbook of child psychology: Theoretical models of human development* (Vol.1, 6th ed., pp.793–828). John Wiley & Sons Inc.
- Bryant, D., Zaslow, M., & Burchinal, M. (2010). Issues in measuring program quality. In V. Wesley, & V. Buysse (Eds.), *The quest for quality: Promising innovations for early childhood programs* (pp. 47–67). Baltimore, London, Sydney: Pauls H. Brookes Publishing Co.
- Burchinal, M. R., Howes, C., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2008). Predicting child outcomes at the end of kindergarten from the quality of pre-kindergarten teacher–child interactions and instruction. *Applied Development Science*, 12, 140–153.
<https://www.tandfonline.com/doi/abs/10.1080/10888690802199418>
- Burchinal, M., Magnuson, K., Powell, D., & Hong, S. S. (2015). Early child care and education and child development. In Bornstein, M., Lerner, R., & Leventhal, T. (Eds.), *Handbook of child psychology and developmental science* (Vol. 4, 7th ed., pp. 223–267). Hoboken, NJ: Wiley.
- Burchinal, M., Hong, S., Sabol, T., Forestieri, N., Peisner-Feinberg, E., Tarullo, L., & Zaslow, M. (2016). *Quality rating and improvement systems: Secondary data analyses of psychometric properties of scale development*. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
<http://www.researchconnections.org/childcare/resources/30046/pdf>

- Burchinal, M. (2018). Measuring early care and education quality. *Child development perspectives*, *12*(1), pp. 3-9. <https://srcd.onlinelibrary.wiley.com/doi/10.1111/cdep.12260>
- Caronongan, P., Kirby, G., Boller, K., Modlin, E., & Lyskawa, J. (2016). *Assessing the implementation and cost of high-quality early care and education: A review of the literature*. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services <https://files.eric.ed.gov/fulltext/ED579799.pdf>
- Cassidy, D., Lower, J., Kintner-Duffy, V., Hedge, A., & Shim, J. (2011). The day-to-day reality of teacher turnover in preschool classrooms: An analysis of classroom context and teacher, director, and parent perspectives. *Journal of Research in Childhood Education*, *25*(1), pp. 1-23. http://libres.uncg.edu/ir/uncg/f/D_Cassidy_Day_2011.pdf
- Children's Learning Institute. (2019). *Findings from the Strengthening Texas Rising Star Implementation Study*. The University of Texas Health Science Center at Houston. https://www.childrenslearninginstitute.org/media/154340/strengthening_trs_implementation_study-final_report.pdf
- Child Care Aware. (2015). *Parents and the high cost of child care*. <https://www.childcareaware.org/wp-content/uploads/2016/05/Parents-and-the-High-Cost-of-Child-Care-2015-FINAL.pdf>
- Child Care and Development Block Grant (CCDBG) Act of 2014 (Pub. L. 113-186), 113th Congress. <https://www.federalregister.gov/documents/2016/09/30/2016-22986/child-care-and-development-fund-ccdf-program>
- Clements, D. H., & Sarama, J. (2008). Experimental evaluation of the effects of a research-based preschool mathematics curriculum. *American Educational Research Journal*, *45*, 443-494. <https://doi.org/10.3102/0002831207312908>
- District of Columbia, Office of the State Superintendent. (2018). *Modeling the cost of child care in the District of Columbia*. <https://osse.dc.gov/publication/modeling-cost-child-care-district-columbia-2018>
- Early, D., Maxwell, K., Burchinal, M., Alva, S., Bender, R., Bryant, D., et al. (2007). Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs. *Child Development*, *78*, 558-580.
- Eckhardt, A., & Egert, F. (2020). Predictors for the quality of family child care: A meta-analysis. *Children and Youth Services Review*, Elsevier, vol. 116(C). <https://ideas.repec.org/a/eee/cysrev/v116y2020ics0190740920302942.html>
- Egert, F., Fukink, R., & Eckhardts A. (2018). Impact of in-service professional development programs for early childhood teachers on quality ratings and child outcomes: A meta-analysis. *Review of Educational Research*, *88*(3), 401-433. <https://journals.sagepub.com/doi/abs/10.3102/0034654317751918>

- Franko, M., Brodsky, A., Wacker, A., & Estrada, M. (2017). *Bearing the cost of early care and education in Colorado: An economic analysis*. Butler Institute for Families, Graduate School of Social Work, University of Denver. <https://earlymilestones.org/wp-content/uploads/2020/01/Bearing-the-Cost-of-ECE-in-Colorado.pdf>
- Glantz, F., & Layzer, J. (2000). The Cost, Quality and Child Outcomes Study: A critique. Abt Associates. <https://www.abtassociates.com/sites/default/files/2019-04/ccqual.PDF>
- Gopnik, A., Meltzoff, A. N., & Kuhl, P. (1999). *The scientist in the crib: What early learning tells us about the mind*. New York, NY: HarperCollins.
- Hallam, R., Hooper, A., Bargreen, K., Buell, M., & Han, M. (2017). A two-state study of family child care engagement in Quality Rating and Improvement Systems: A mixed-methods analysis. *Early Education and Development*, 28(6), 669-683, doi: 10.1080/10409289.2017.1303306
- Helburn, S.W. (Ed.) (1995). *Cost, quality, and child outcomes in child care centers: Technical report*. Center for Research in Economic and Social Policy, Economics Department, University of Colorado at Denver. <https://files.eric.ed.gov/fulltext/ED386297.pdf#page=383>
- Hertzman, C. (2013). The significance of early childhood adversity. *Pediatrics & Child Health*, 18(3), 127-128, doi: 10.1093/pch/18.3.127
- Howes, C., Burchinal, M., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2008). Ready to learn? Children's pre-academic achievement in pre-kindergarten programs. *Early Childhood Research Quarterly*, 23, 27-50. doi: 10.1016/j.ecresq.2007.05.002
- Korjenevitch, M., & Dunifon, R. (2010). *Child Care Center Quality and Child Development*. Ithaca, New York: Cornell University.
- Levin, H.M., & Schwartz, H.L. (2007). *What is the cost of a preschool program?* Paper presented at the Association for Education Finance Analysis Conference, Baltimore, MD.
- Marshall, N.L., Creps, C.L., Burstein, N.R., Glantz, F., Robeson, W.W., & Barnett, S. (2001). *The cost and quality of full day, year-round early care and education in Massachusetts: Preschool classrooms*. Wellesley Centers for Women and Abt Associates, Inc. <https://sites.google.com/wellesley.edu/workfamilieschildren/resources/project-reports>
- Marshall, N.L., Creps, C.L., Burstein, N.R., Roberts, J., Dennehy, J., Robeson, W.W., & Glantz, F. (2004). *The cost and quality of full day, year-round early care and education in Maine: Preschool classrooms*. Wellesley Centers for Women, Muskie Institute of the University of Southern Maine, and Abt Associates, Inc. <https://sites.google.com/wellesley.edu/workfamilieschildren/resources/project-reports>
- Marshall, N.L., Creps, C.L., Roberts, J., Glantz, F.B., & Robeson, W.W. (2004). *The cost and quality of full-day year-round early care and education in Massachusetts: Infant and toddler classrooms*. Wellesley Centers for Women and Abt Associates, Inc. <https://sites.google.com/wellesley.edu/workfamilieschildren/resources/project-reports>

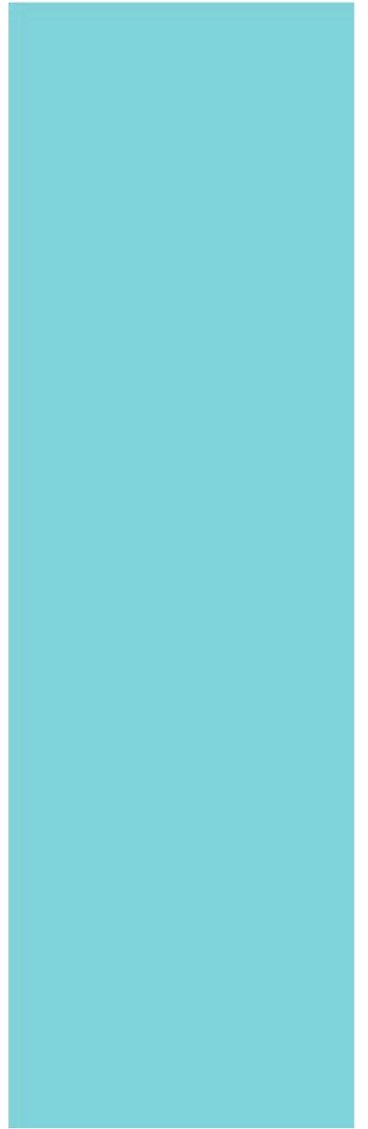
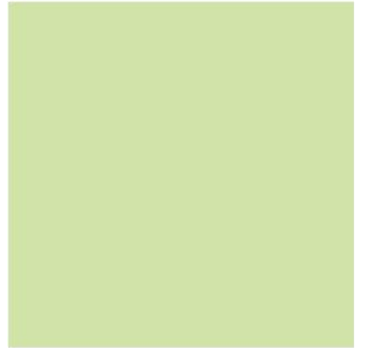
- Mashburn, A., Pianta, R., Hamre, B., Downer, J., Barbarin, O., Bryant, D., Burchinal, M., Early, D., & Howes, C. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development, 79*, 732-749. doi: 10.1111/j.1467-8624.2008.01154
- Mashburn, A. J., Pianta, R. C., Barbarin, O. A., Bryant, D., Hamre, B. K., Downer, J., & Howes, C. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development, 79*, 732-749. <https://doi.org/10.1111/j.1467-8624.2008.01154.x>
- Melhuish, E., Ereky-Stevens, K., Petrogiannis, K., Aricescu, A., Penderi, E., Rentzou, K., Tawell, A, Slot, P., Broekhuizen, M. and Leseman, P. (2015). *A review of research on the effects of early childhood education and care (ECEC) on child development*. CARE – European Early Childhood Education and Care. <https://ecec-care.org/fileadmin/careproject/Publications/reports>
- Mims, S., Scott-little, C., Lower, J., Cassidy, D., & Hestenes, L. (2008). Education level and stability as it relates to early childhood classroom quality: A survey of early childhood program directors and teachers. *Journal of Research in Childhood Education, 23*(2), 227-237.
- Mitchell, A. (2017). *The cost of quality child care study: A community release & recommendations*. Workforce Solutions for Tarrant County and Workforce Solutions Greater Dallas County. <http://earlylearningntx.org/wp-content/uploads/2017/07/Cost-of-Quality-Study.pdf>
- National Association for the Education of Young Children and National Association of Early Childhood Specialists in State Departments of Education. (2003). *Early childhood curriculum, assessment, and program evaluation: Building an effective, accountable system in programs for children birth through age 8*. www.naeyc.org/resources/position_statements/pscape.asp.
- National Research Council. (2015). *Transforming the workforce for children birth through age 8: A unifying foundation*. Washington, DC: The National Academies Press. Retrieved from <https://doi.org/10.17226/19401>
- Office of Child Care. QRIS resource guide. US Department of Health and Human Services, Administration for Families and Children, Office of Child Care. Available at <https://ecquality.acf.hhs.gov/about-gris>
- Pianta, R. C., Barnett, W. S., Burchinal, M., & Thornburg, K. R. (2009). The Effects of Preschool Education: What We Know, How Public Policy Is or Is Not Aligned With the Evidence Base, and What We Need to Know. *Psychological Science in the Public Interest, 10*(2), 49-88. <https://doi.org/10.1177/1529100610381908>
- Powell, D. R., Diamond, K. E., Burchinal, M. R., & Koehler, M. J. (2010). Effects of an early literacy professional development intervention on Head Start teachers and children. *Journal of Educational Psychology, 102*, 299-312. <https://doi.org/10.1037/a0017763>
- Powell, I., & Cosgrove, J. (1992). Quality and cost in early childhood education. *Journal of Human Resources, 472-484*.

- Raver, C. C., Jones, S. M., Li-Grining, C. P., Metzger, M., Smallwood, K., & Sardin, L. (2008). Improving preschool classroom processes: Preliminary findings from a randomized trial implemented in Head Start settings. *Early Childhood Research Quarterly*, 23, 10–26. <https://doi.org/10.1016/j.ecresq.2007.09.001>
- Russell, E., Williams, S. & Gleason-Gomez, C. (2010). Teachers' perceptions of administrative support and antecedents of turnover. *Journal of Research in Childhood Education*, 24(3), 195–208.
- Slot, P., Leseman, P., Verhagen, J., & Mulder, H. (2015). Associations between structural quality aspects and process quality in Dutch early childhood education and care settings. *Early Childhood Research Quarterly*, 33(4), 64-76. <https://doi.org/10.1016/j.ecresq.2015.06.001>
- Texas 2036. (2020). Many Texas Lack Access to High-Speed Internet. <https://texas2036.org/posts/many-texans-lack-access-to-high-speed-internet/>
- Texas Comptroller's Office. Accessed on 5/19/2021 at <https://comptroller.texas.gov/>
- Texas Health and Human Services. (2019). Child Care Regulation Data Book- Child Day Care Statistics, Fiscal Year 2019. Retrieved from <https://hhs.texas.gov/sites/default/files/documents/about-hhs/records-statistics/research-statistics/ccl/ccr-data-book-child-day-care-2019.pdf>
- Texas Health and Human Services. (2021). Minimum Standards for Child Care Centers. Retrieved from <https://www.hhs.texas.gov/sites>
- Texas Workforce Commission. (2020). 2020 Texas child care market rate survey. Available at: <https://www.twc.state.tx.us/>
- Texas Workforce Commission. (2020). Texas Rising Star Four-Year Review Recommendations Discussion Paper and Chapter 809 Policy Concept. Available at: <https://www.twc.texas.gov/files/agency/ch809-trs-policy-concept-approved-7-14-20.pdf>
- Tout, K., Starr, R., Soli, M., Moodie, S., Kirby, G., & Boller, K. (2010). Compendium of quality rating systems and evaluations. Washington, DC: U.S. Administration for Children and Families, Office of Planning, Research and Evaluation.
- U.S. Administration for Children and Families' Office of Child Care . (2015). Provider Cost of Quality Calculator User Guide.
- Vandell, D., & Wolfe, B. (2000). Child care quality: Does it matter and does it need to be improved? (Vol. 78). University of Wisconsin--Madison, Institute for Research on Poverty.
- Wasik, B. A., & Hindman, A. H. (2011). Improving vocabulary and pre-literacy skills of at-risk preschoolers through teacher professional development. *Journal of Educational Psychology*, 103, 455–469. <https://doi.org/10.1037/a0023067>
- Whitebook, M., D. Phillips, & C. Howes. (2014). *Worthy work, STILL unlivable wages: The early childhood workforce 25 years after the National Child Care Staffing Study*. Center for the Study of Child

Care Employment, University of California, Berkeley. <https://cscce.berkeley.edu/worthy-work-still-unlivable-wages/>

Winslow, J. (2019). America's Digital Divide. Pew Research Center.
<https://www.pewtrusts.org/en/trust/archive/summer-2019/americas-digital-divide>

Zellman, G., and Perlman, M. (2008). Child-care quality rating and improvement systems in five pioneer states: Implementation issues and lessons learned. Santa Monica, CA: RAND Corporation.
Retrieved from <https://www.rand.org/pubs/monographs/MG795.html>.



Appendices

APPENDIX A. DATA ANALYSIS

This section is contained in a stand-alone document with this filename:
CQPMR_fin_AppendixA_02Sep2022

APPENDIX B. SURVEY INSTRUMENTS

LICENSED CHILD CARE CENTERS INITIAL SURVEY

Market Rate Questions

1. Hi. Can I please speak to the director of (CENTER NAME)? Hi, my name is _____ and I'm calling from The University of Texas at Austin on behalf of the Texas Workforce Commission. We are conducting the annual child care market rate study. Do you have about 5-10 minutes to answer questions about your center?

- Accept - Continue with survey
- Refusal
- Overdial
- Not eligible
- Wrong number - New number is available _____
- Withdrew

2. Does your facility offer full-time child care at least 6 hours per day and five days a week?

3. If no, does your facility offer school care or part day child care (<6 hours) five days a week?

4. Is your facility any of the following?

- Only a drop-in care center (no regular rates; i.e., gym, hospital, mall)
- A Head Start program
- A free child care service
- A facility not open to the public/only serves specific groups
- A facility offering only summer camps
- A kindergarten or school not offering regular child care or after-school care
- None of the above- Continue Survey

Hours of Operation, Vacation and Holidays

5. What are your hours of operation (Monday-Friday)?

Weekday	Open	Close
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		

6. What are your hours of operation on Saturday and Sunday, if any?

Weekday	Open	Close
Saturday		
Sunday		

7. How many days out of the year do you close for national, state, or religious holidays?
8. Outside of weekends and holidays, how many days out of the year do you close for personal vacation, summer, or any other reasons?
9. Do you regularly offer drop-in care?
 - Yes
 - No
 - Don't know

Enrollment

10. Altogether, how many children are enrolled at your center?

Number of Children Enrolled: _____

Number of Age Groups: _____

11. What are the age groups on which your rate structure is based?

Group	Age Range in Months		Total Enrolled		Comments about age group
	Min	Max	Full Time 5 days, 6+hrs	Part Day 5 days, <6 hrs	

Ratios (Cost of Quality Item Only)

For each age group ask:

- A. How many classrooms do you have for this age group?
- B. How many children are typically in a classroom for this age group?
- C. How many teachers are typically in a classroom for this age group?

Rates

Full-Time Rates: Ask about each age group

- a. What are your standard full-time rates (6+hrs per day/5 days per week) for children in Age Group__?
- b. Is that rate per hour, day, week, month, or year?
- c. How many days of care per week does this rate cover?
- d. Do you currently have a full-time waitlist for this group?

Part Day Rates: Ask about each age group

- a. What are your standard part day rates (Less than 6 hrs per day/5 days per week) for children in Age Group__?
- b. Is that rate per hour, day, week, month, or year?
- c. How many days of care per week does this rate cover?
- d. Do you currently have a part day waitlist for this group?

Additional Weekend Rates

- a. What are your standard Additional weekend rates for children in Age Group ___?
- b. Is that rate per hour, day, week, month, or year?

12. Rate Comments

Additional Fees

13. Fees: Do you charge a _____ (in addition to the regular rate)?

	Amount
One-time registration fee	
Yearly or semester enrollment fee	
Additional activity or supply fee	

14. If enrollment fee is Yes: Is your enrollment fee per _____?

- Semester
- Academic Year
- Calendar Year

15. If activity fee is Yes: Is your activity fee per _____?

- Month
- Trimester
- Semester
- Academic Year
- Calendar Year

16. Comments about additional rates

17. Do you provide any discounts in the form of a sliding scale? (Note: If offer scholarships to some children, count as sliding scale)

- Yes
- No
- Don't know

CCS Children

18. Do you accept CCS children (children receiving subsidies)? How many slots do you allocate for CCS children?

- Do not accept CCS children
- Accept CCS children, do NOT allocate a specific number of slots
- Accept CCS children, allocate specific number or percent of slots: ___
- Don't Know

If no-> Is there a reason you do not accept CCS children?

- Not currently caring for CCS children but do accept
- In process of setting up
- Families have not requested or needed
- Paperwork/reporting requirements
- Reimbursement rates too low
- Not receiving/receiving late parent co-pays
- Not receiving/receiving late CCS payments
- Facility is full/fills too quickly
- Facility is new/too small
- Need more information/training
- No reason provided
- Other_____

If yes-> Do you charge families an additional amount if their total CCS subsidy plus parent co-pay is less than your established rate?

- Yes
- No
- Don't know
- Does not apply

Program Information

19. Does your center offer regular transportation? (Excludes field trips)

- Yes
- No
- Don't know

20. Is your child care center a for-profit or non-profit facility (501.C3 status)?

- Non-Profit
- For-Profit
- Don't know

21. Is your child care facility _____?

- Part of a local or regional chain
- Part of a national chain
- Independently owned
- Other _____
- None of the above
- Don't know

22. Is your child care associated with any of the following?

- Church or religious organization
- Community-based organization
- YMCA/ YWCA
- Public school
- Private or parochial school
- Military institution
- Other _____
- No associations
- Don't know

23. Does your facility receive any of the following services for free or at a reduced cost?

- Building use
- Utilities
- Volunteer work
- Furniture or equipment
- Supplies
- Other _____
- None
- Don't know

24. Does your facility receive any donations?

- Federal Child Care Food Program
- CCMS (other than subsidies)
- United Way
- Religious institutions
- Local, state or federal government funding
- Private or individual donations
- YMCA / YWCA
- School district
- Foundations
- Other _____
- No donations
- Don't know

25. In addition to your state operating license, does your center have any of the following national accreditation or certifications?

- NAEYC - National Association for the Education of Young Children
- NAFCC - National Association for Family Child Care
- NACC - National Association of Child Care Professionals
- Montessori Accreditation
- Other: _____
- No accreditations
- Don't know

26. Is your service certified as a Texas Rising Star provider?

- Yes, number of stars: _____
- No
- Don't know

27. General comments.

Quality of Care Questions

If Accreditations = NAEYC, NAFCC, or NACC.

28. What is your estimated annual fee to maintain your center’s national accreditation? _____

If no accreditation nor Texas Rising Star certification.

29. Have you ever considered becoming nationally accredited or Texas Rising Star certified?

- Yes
- No

30. If yes, what made you decide not to?

Staff Qualifications and Experience

For this next section, please think about your full-time and part-time staff who work directly with children under the age of 13. I will refer to these staff as your direct care staff.

31. How many direct care staff work at your center? _____

32. How many of these staff are full-time? _____

For these next two questions, I will be asking about your staff’s highest level of education and credentials.

33. How many of your direct care staff have a highest degree of a...?

Degree	Total Staff
High school diploma or GED	
Associate’s degree	
Bachelor’s degree	
Master’s degree	
Doctorate or professional degree	

34. How many of your direct care staff have a Child Development Associate (CDA) Credential? _____

35. How many of your direct care staff have less than two years of experience working in early childhood education? _____

36. How many of your direct care staff have six or more years of experience working in early childhood education? _____

Pay Rates and Benefits

For this next section, we are going to ask about the hourly wages of your full-time direct care staff.

37. Do your hourly wages differ based on what age group a teacher is teaching?

- Yes
- No
- Prefer not to answer

38. What is the hourly wage for your highest paid full-time **lead** teacher?

\$____ per hour

39. What is the hourly wage for your lowest paid full-time **lead** teacher?

\$____ per hour

40. What is the hourly wage for your highest paid full-time **assistant** teacher?

\$____ per hour

41. What is the hourly wage for your lowest paid full-time **assistant** teacher?

\$____ per hour

If yes to #40.

42. What is the hourly wage for your highest paid full-time **lead infant** teacher? (0-17 months)

\$____ per hour

43. What is the hourly wage for your lowest paid full-time **lead infant** teacher? (0-17 months)

\$____ per hour

44. What is the hourly wage for your highest paid full-time **assistant infant** teacher? (0-17 months)

\$____ per hour

45. What is the hourly wage for your lowest paid full-time **assistant infant** teacher? (0-17 months)

\$____ per hour

46. What is the hourly wage for your highest paid full-time **lead toddler** teacher? (18-35 months)

\$____ per hour

47. What is the hourly wage for your lowest paid full-time **lead toddler** teacher? (18-35 months)

\$____ per hour

48. What is the hourly wage for your highest paid full-time **assistant toddler** teacher? (18-35 months)

\$____ per hour

49. What is the hourly wage for your lowest paid full-time **assistant toddler** teacher? (18-35 months)

\$____ per hour

50. What is the hourly wage for your highest paid full-time **lead pre-K** teacher? (36-71 months)

\$____ per hour

51. What is the hourly wage for your lowest paid full-time **lead pre-K** teacher? (36-71 months)

\$____ per hour

52. What is the hourly wage for your highest paid full-time **assistant pre-K** teacher? (36-71 months)

\$____ per hour

53. What is the hourly wage for your lowest paid full-time **assistant pre-K** teacher? (36-71 months)

\$____ per hour

54. Do you offer...?

	Yes	No	Unknown
Reduced tuition for staff children enrolled in your program			
Retirement programs such as annuity, 401(k) or 403(b) plan			
Health insurance			
Paid time off for vacation, holidays, or other			
Tuition assistance for college/CDA courses			

Training

55. In the past 12 months, did your center have any of the following training expenses?

	Yes	No	Unknown
Conference or workshop fees			
Onsite training fees			

Online training fees	
Travel costs for off-site training	
Payments to substitutes to cover the classroom while staff are in training	

Staff Turnover and Absenteeism

56. How many direct care staff left your center in the last 12 months? ____
57. How many of these staff were full-time? ____
58. When direct care staff are absent or there are vacancies in classrooms, are you most likely to cover for them by...?
- Having the director substitute
 - Substituting with other current staff
 - Substituting temporary or outside staff
 - Other

Curriculum

59. Do you use a curriculum or prepared set of learning and play activities for infants, toddlers or pre-K?
- Infants (0-17 months)
 - Toddlers (18-35 months)
 - Preschool/Pre-K (36-71 months)
 - None of the above

If yes, curriculum for INFANTS.

60. Which curriculum or prepared set of learning and play activities do you use with INFANTS?

- Curriculum developed by provider
- Creative Curriculum (Includes Learning Games)
- Frog Street Curriculum
- Galileo
- HighScope
- Innovation Series Curriculum
- Montessori Curriculum
- Opening the World of Learning (OWL)
- Preschool Paths
- Program for Infant/Toddler Care (PICT)
- Project Approach
- Reggio Emilia Approach
- Scholastic Early Childhood Program (SECP)
- Waldorf Approach
- Work Sampling System
- Other _____
- Prefer not to answer

If yes, curriculum for TODDLERS.

61. Which curriculum or prepared set of learning and play activities do you use with TODDLERS?

- Curriculum developed by provider
- Creative Curriculum (Includes Learning Games)
- Frog Street Curriculum
- Galileo
- HighScope
- Innovation Series Curriculum
- Montessori Curriculum
- Opening the World of Learning (OWL)
- Preschool Paths
- Program for Infant/Toddler Care (PICT)
- Project Approach
- Reggio Emilia Approach
- Scholastic Early Childhood Program (SECP)
- Waldorf Approach
- Work Sampling System
- Other _____
- Prefer not to answer

If yes, curriculum for PRESCHOOLERS OR PRE-K.

62. Which curriculum or prepared set of learning and play activities do you use with PRESCHOOLERS OR PRE-K?

- Curriculum developed by provider
- Creative Curriculum (Includes Learning Games)
- Frog Street Curriculum
- Galileo
- HighScope
- Innovation Series Curriculum
- Montessori Curriculum
- Opening the World of Learning (OWL)
- Preschool Paths
- Program for Infant/Toddler Care (PICT)
- Project Approach
- Reggio Emilia Approach
- Scholastic Early Childhood Program (SECP)
- Waldorf Approach
- Work Sampling System
- Other _____
- Prefer not to answer

63. What is the cost of your curriculum for [age group]?

Group	Curriculum Cost	Duration				NA
		Month	Semester	Academic year	Calendar year	
G1						
G2						
G3						
G4						
G5						
G6						
G7						
G8						
If participant only knows the total cost of all curricula, enter it here:						

Assessments

64. Does your center use formal assessments to measure children's developmental progress?

- Yes
- No

65. If yes, which assessments?

- BASC-3 BESS: Behavioral and Emotional Screening System
- CIRCLE Progress Monitoring
- DIAL-4: Developmental Indicators for the Assessment of Learning
- Frog Street Assessment
- GOLD
- Istation's Indicators of Progress
- LAP-3: Learning Accomplishment Profile-3
- Ready, Set, K!
- Work Sampling System
- Other _____
- Prefer not to answer

66. If no, does your center use informal assessments to measure children's developmental progress?

- Yes
- No

Planning and Nutrition

67. How many paid hours each week are direct care staff given for planning children's activities?

____ hours per week

68. Does your center provide free meals and snacks?

- Yes
- No
- Prefer not to answer

69. If yes, how many snacks per day?

- 0
- 1
- 2
- 3
- 4 or more
- Prefer not to answer

70. If yes, how many meals per day?

- 0
- 1

- 2
- 3
- 4 or more
- Prefer not to answer

71. Lastly, are there any other costs associated with providing quality care that we did not ask about? _____

72. Is there anything you would like to share about how COVID-19 has affected your center? _____

Thank you for your time.

LICENSED CHILD CARE CENTERS FOLLOW-UP SURVEY

Market Rate Questions

All Market Rate questions from the Licensed Child Care Centers Survey were included in the follow-up survey.

Cost of Quality Questions

The following cost of quality items were also included the follow-up survey:

Ratios

For each age group ask:

1. How many classrooms do you have for this age group?
2. How many children are typically in a classroom for this age group?
3. How many teachers are typically in a classroom for this age group?

Staff Experience

For this next section, please think about your full-time and part-time staff who work directly with children under the age of 13. I will refer to these staff as your direct care staff.

4. How many direct care staff work at your center? ____
5. How many of your direct care staff have less than two years of experience working in early childhood education? ____
6. How many of your direct care staff have six or more years of experience working in early childhood education? ____

COVID-19 Impact

The following set of questions was not asked in the original Cost of Quality survey and was added for the follow-up to assess the impact that COVID-19 has had on child care centers in Texas.

7. Have you closed your facility or stopped serving children for any period of time due to COVID-19?
- Yes, how many weeks? ____
 - No
 - Prefer not to say
8. Overall, has your capacity to serve children increased, stayed about the same, decreased or stopped altogether due to COVID-19?
- Increased
 - Stayed about the same
 - Decreased
 - Stopped
 - Prefer not to say
9. Has the number of infants you care for increased, stayed about the same, decreased or stopped altogether since COVID-19?
- I Increased
 - Stayed about the same
 - Decreased
 - Stopped
 - Prefer not to say
 - Does not apply- The provider did not previously serve this age group and does not serve them now.
10. Has the number of toddlers you care for increased, stayed about the same, decreased or stopped altogether since COVID-19?
- I Increased
 - Stayed about the same
 - Decreased
 - Stopped
 - Prefer not to say
 - Does not apply- The provider did not previously serve this age group and does not serve them now.
11. Has the number of preschoolers you care for increased, stayed about the same, decreased or stopped altogether since COVID-19?
- I Increased
 - Stayed about the same
 - Decreased
 - Stopped
 - Prefer not to say
 - Does not apply- The provider did not previously serve this age group and does not serve them now.

12. Has the number of school-age children you care for increased, stayed about the same, decreased or stopped altogether since COVID-19?

- I Increased
- Stayed about the same
- Decreased
- Stopped
- Prefer not to say
- Does not apply- The provider did not previously serve this age group and does not serve them now.

13. Since COVID-19 started, have you received payment for children who weren't attending to save their slots?

- Yes
- No
- Prefer not to say
- Does not apply - all children have attended

14. Do you provide child care to children of essential workers?

- Yes
- No
- Prefer not to say or unknown

15. Have you had to lay off staff due to COVID-19?

- Yes
- No
- Prefer not to say

16. Have any of your staff quit or retired early due to COVID-19?

- Yes
- No
- Prefer not to say

17. Have you or any of your staff received unemployment insurance payments?

- Yes
- No
- Prefer not to say

18. Have you received...? (Select all that apply)

- A Paycheck Protection Program (PPP) loan from the Small Business Administration
- Rent or mortgage payment deferrals
- Enhanced reimbursement rates from TWC?
- Funds for minor program modifications to meet safety guidelines?
- Other grants
- Other loans
- None of the above

19. *If PPP loan is received:* Do you expect to have to pay back your PPP loan?

- Yes
- No
- Prefer not to say or unknown

20. Have you received any donations related to COVID-19 such as PPE or cleaning supplies?

- Yes
- No
- Prefer not to say or unknown

21. As a result of COVID-19, have you incurred any of the following additional costs? (Select all that apply)

- Increased staff costs to maintain small and consistent groups of children
- Cleaning supplies
- Personal protection equipment (masks, gloves, etc)
- Necessary facility changes

For each additional cost that has been incurred:

- A. What is the amount you've incurred?
- B. Is that amount per week, month or overall?
- C. Is that amount per child, per staff, or overall?

22. Have you had to raise your regular rates to make up for these additional costs?

- Yes
- No
- Prefer not to say

LICENSED/REGISTERED CHILD CARE HOMES SURVEY

Market Rate Questions

1. Hi. Can I please speak to (NAME)? Hi, my name is _____ and I'm calling from The University of Texas at Austin on behalf of the Texas Workforce Commission. We are conducting the annual child care market rate study. Do you have about 5-10 minutes to answer questions about your home?

- Accept - Continue with survey
- Refusal
- Overdial
- Not eligible
- Wrong number - New number is available _____
- Withdrew

2. Are you a registered or licensed home child care provider?

- Registered Child Care Home (RCCH)
- Licensed Child Care Home (LCCH)
- Neither- Not Eligible

Hours of Operation, Vacation and Holidays

3. What are your hours of operation (Monday-Friday)?

Weekday	Open	Close
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		

4. What are your hours of operation on Saturday and Sunday, if any?

Weekday	Open	Close
Saturday		
Sunday		

5. Do you regularly offer drop-in care?

- Yes
- No
- Don't know

6. How many days out of the year do you close for national, state, or religious holidays?

7. Outside of weekends and holidays, how many days out of the year do you close for personal vacation, summer, or any other reasons?

8. Altogether, how many children including your own are you currently caring for at your home?

Number of all children: _____

9. How many of these children are either not paying or paying at discounted rates because they are friends or family?

Number of Discounted Children: _____

Total Eligible Children: _____

CCS Children

For Interviewer purpose only, I am only going to ask about the children not receiving friend or family discounting rates.

10. How many of these children receive subsidized care through CCS? _____

If 0-> Is there a reason you do not accept CCS children?

- Not currently caring for CCS children but do accept
- In process of setting up
- Families have not requested or needed
- Paperwork/reporting requirements
- Reimbursement rates too low
- Not receiving/receiving late parent co-pays
- Not receiving/receiving late CCS payments
- Facility is full/fills too quickly
- Facility is new/too small
- Need more information/training
- No reason provided
- Other_____

If >0 -> Do you charge families an additional amount if their total CCS subsidy plus parent co-pay is less than your established rate?

- Yes
- No
- Don't know
- Does not apply

For these next questions, I will ask about each child's age and schedule. If you care for siblings, please list them together by family. We will start with your families who are subsidized.

11. How old is the youngest child in the first family?

12. What time does this child arrive on ____? (Monday-Sunday)

13. What time do they leave on ____? (Monday-Sunday)

Child	Family ID		Age Months	Mon		Tues		Wed		Thurs		Fri		Sat		Sun	
	Family	Child		*A	*L	*A	*L	*A	*L	*A	*L	*A	*L	*A	*L	*A	*L

*A=Arrive/*L=Leave

Rates

14. Does child __ receive subsidized care through CCS?

Ask about non-ccs and ccs rates.

- a. *NON-CCS*: What is the rate or cost of child care for this child?
- b. *CCS/Copay*: Can you tell me the amount you receive from CCS? / What is the parent copay?
- c. *CCS Total*: How much money do you receive in total for the care of this child?

15. Is that rate per hour, day, week, month, or year?

16. Does this child receive a multiple child discount?

17. How many children are covered under this rate?

18. Rate Comments

Additional Fees

19. Fees: Do you charge a _____ in addition to the regular rate?

	Amount
One-time registration fee	
Yearly or semester enrollment fee	
Additional activity or supply fee	

20. If enrollment fee is Yes: Is your enrollment fee per _____?

- Semester
- Academic Year
- Calendar Year

21. If activity fee is Yes: Is your activity fee per _____?

- Month
- Trimester
- Semester
- Academic Year
- Calendar Year

22. Comments about additional rates

Program information

23. Do you offer regular transportation as defined by using your own personal vehicle to transport children (excludes field trips)?

- Yes
- No
- Don't know

24. Do you have a waitlist for any age groups? If so, which ones?

- Infants (0-17 months)
- Toddlers (18-35 months)
- Preschool (36-71 months)
- School Age (72+ months)
- No Waitlist
- Don't know

25. Is your child care home a for-profit or non-profit child care home (501.C3 status)?

- Non-Profit
- For-Profit
- Don't Know

26. Is your child care associated with any of the following?

- Church or religious organization
- Community-based organization
- Other _____
- No associations
- Don't know

27. In addition to your state operating license, does your home have any of the following national accreditation or certifications?

- NAEYC - National Association for the Education of Young Children
- NAFCC - National Association for Family Child Care
- NACC - National Association of Child Care Professionals
- Montessori Accreditation
- Other: _____
- No accreditations
- Don't know

28. Is your service certified as a Texas Rising Star provider?

- Yes, number of stars: _____
- No
- Don't know

29. General comments

Cost of Quality Survey

If Accreditations = NAEYC, NAFCC, or NACC.

30. What is your estimated annual fee to maintain your center's national accreditation? _____

If no accreditation nor Texas Rising Star certification.

31. Have you ever considered becoming nationally accredited or Texas Rising Star certified?

- Yes
- No

32. If yes, what made you decide not to?

Staffing

Director

For this section, I will be asking questions about you as the primary child care provider.

33. What is your highest degree of education?

- No degree
- High school diploma or GED
- Associate's degree
- Bachelor's degree
- Master's degree
- Doctorate or professional degree
- Prefer not to answer

34. Do you have a Child Development Associate (CDA) Credential?

- Yes
- No
- Prefer not to answer

35. How many years of experience do you have working in child care or early childhood education? ____
years

36. Do you take care of your own children as well as the children of others?

- Yes
- No

37. If you were offered another job that required you to close your child care home, what is the minimum hourly wage that you would accept? ____ dollars per hour

38. Additional comments about wage (i.e. they would only accept with benefits).

39. Approximately how much of your household income in 2019 came from providing childcare?

- All
- Almost all
- More than half
- About half
- Less than half
- Very little
- None
- Prefer not to answer

Helper

40. How many people regularly **help you** provide childcare? ____

41. How many of these helpers are paid? ____

Skip to Training if 38 OR 39 is equal to 0

Please answer the next few questions about your helper (helper you pay the most)?

42. Does your helper work with all children or with a specific age group of children?

- All children
- A specific age group of children
- Prefer not to answer

43. Which age groups?

- Infants (0 – 17 months)
- Toddlers (18 – 35 months)
- Preschoolers (36 – 71 months)
- School-age children (72+ months)
- Prefer not to answer or unknown

44. What is your helper's highest degree of education?

- No degree
- High school diploma or GED
- Associate's degree
- Bachelor's degree
- Master's degree
- Doctorate or professional degree
- Prefer not to answer or unknown

45. Does your helper have a Child Development Associate (CDA) Credential?

- Yes
- No
- Don't know

46. Does your helper have more than six years of experience working in child care or early childhood education?

- Yes
- No
- Don't know

47. Does your helper have less than 2 years of experience working in child care or early childhood education?

- Yes
- No
- Don't know

48. How much do you pay your helper? \$_____ (per hour, day, week, month)

49. Is that rate per ___?

- Hour
- Day
- Week
- Month
- Year
- Prefer not to answer

50. Do you offer or provide your helper with free or reduced-cost childcare?

- Yes
- No
- Does not apply
- Prefer not to answer

51. How many children do you take care of when you have a helper? _____

52. How many children do you take care of when it is just you alone? _____

Training

53. In the past 12 months, did your home have any of the following training expenses?

	Yes	No	Unknown
Conference or workshop fees			
Onsite training fees			
Online training fees			
Travel costs for off-site training			

Curriculum

54. Do you use a curriculum or prepared set of activities?

- Yes
- No
- Prefer not to answer

55. If yes, which curriculum or prepared set of learning and play activities do you use?

- Curriculum or activities developed by provider
- Creative Curriculum (Includes Learning Games)
- Galileo
- HighScope
- Innovation Series Curriculum
- Montessorri Curriculum
- Opening the World of Learning (OWL)
- Preschool Paths
- Program for Infant/Toddler Care (PICT)
- Project Approach
- Reggio Emilia Approach
- Scholastic Early Childhood Program (SECP)
- Waldorf Approach
- Work Sampling System
- Other: _____
- Prefer not to answer or don't know

56. What is the cost of this curriculum? _____ Dollars

57. Is that per ____?

- Month
- Semester
- Academic year
- Calendar year
- Prefer not to answer

58. Additional Comments about cost of curriculum:

Assessments

59. Do you use formal assessments to measure children's developmental progress?

- Yes
- No
- Prefer not to answer

60. If yes, which assessments?

- BASC-3 BESS: Behavioral and Emotional Screening System
- CIRCLE Progress Monitoring
- DIAL-4: Developmental Indicators for the Assessment of Learning
- Frog Street Assessment
- GOLD
- Istation's Indicators of Progress (ISIP)
- LAP-3: Learning Accomplishment Profile-3
- Ready, Set, K!
- Work Sampling System
- Other _____
- Prefer not to answer

61. If no formal assessment, do you use informal assessments to measure children's developmental progress?

- Yes
- No
- Prefer not to answer

Planning and Nutrition

62. How much time do you spend each week planning children's activities? _____ Hours per week

63. Does your home provide free meals and snacks?

- Yes
- No
- Prefer not to answer

64. If yes, how many snacks per day?

- 0
- 1
- 2
- 3
- 4 or more
- Prefer not to answer

65. If yes, how many meals per day?

- 0
- 1
- 2
- 3
- 4 or more
- Prefer not to answer

66. Lastly, are there any other costs associated with providing quality care that we did not ask about? _____

67. Is there anything you would like to share about how COVID-19 has affected your child care home? _____

Thank you for your time



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