MAINE'S *QUALITY FOR ME* – CHILD CARE QUALITY RATING AND IMPROVEMENT SYSTEM (QRIS): FINAL EVALUATION REPORT

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I. INTRODUCTION

A. Description of *Quality for ME* (QRIS)

Maine's quality rating and improvement system, *Quality for ME*, is a four step program designed to increase awareness of the basic standards of early care and education, to recognize and support providers who are providing care above those standards, and to educate families and community about what high quality care is and why it is important. Step One programs are in compliance with licensing, have been in operation for over a year, and staff are members of the state registry. Step Four programs meet standards aligned with the national associations plus specific training requirements unique to Maine's Early Childhood Learning Guidelines and/or Infant Toddler Learning Guidelines. Planning for a quality rating and improvement system (QRIS) began in 2004 and the standards were designed with involvement of child care providers and parents, and piloted during 2007. *Quality for ME* was officially implemented in early 2008 and now approximately 1,031 licensed child care programs of all types have enrolled into the QRIS; this represents 50% of all eligible licensed programs across the state. Programs that receive CCDF funding or subsidy are required to enroll into the QRIS, all other programs enroll on a voluntary basis.

Programs enroll into the QRIS through an online application process which makes use of linked data sets from the state licensing records and the *Maine Roads to Quality* or state registry records on teacher qualifications and training. Programs that enroll into the QRIS are required to have all their staff join the state registry. The program is provided with an initial Step Level rating based on self report and then that rating is confirmed by the state Division of Early Care and Education. Programs can apply for a new Step at any time and their Step Level rating is good for three years. One consistent pattern of enrollment into the QRIS is that family child care homes are enrolling at a significantly lower Step Level than center-based programs. Head Start programs are all enrolling at no less than a Step Three. There are increased financial incentives for programs to move up the Step Levels, including increased compensation per child for those programs serving children supported by government subsidy. In addition, Maine will double the child tax credit for parents whose children are served in Step Four programs.

B. Purpose of the Evaluation

The purpose of the evaluation of the QRIS is to monitor program enrollment into the system and to explore differences in tier or Step Level by program type. The evaluation was implemented along with the start of the program in 2008 and evaluation results are shared with DHHS program staff on a regular basis. The information generated from evaluation activities is used for purposes of program improvement and program management. There is no measurement of child outcomes as this evaluation is focused at the child care program level.

II. EVALUATION DESIGN

A. Research Questions

The design of the evaluation is based on the *Quality for ME* program logic model, presented as Figure 1 that follows. The evaluation design for monitoring the QRIS consists of observing various aspects of program quality at one point in time, and then comparing the results of those observations between types of programs and program Step Level. The evaluation is designed to answer the following questions:

- What are the characteristics of programs enrolled in the QRIS?
- What is the quality of the program learning environment as measured by the Environmental Rating Scales (ERS)?
- What are the differences in program characteristics at each Step Level?
- What are the differences in program quality comparing similar program types between Step Levels?
- What are parent perceptions of program services and quality?
- What are the characteristics and perspectives on learning of center-based program teachers / staff and family child care home providers?

The evaluation is not designed to evaluate a single program for the purpose of program improvement or as a single program evaluation. There are no child or family level data collected in this study. Stakeholders to the evaluation are interested in whether or not there are differences between the same types of programs at different Step Levels.

FIGURE 1 – *QUALITY FOR ME* QRIS LOGIC MODEL

Resources / Inputs	Activities	Outputs	Immediate Outcomes	Long Term Outcomes
- **EDUCATION / TRAINING SERVICES** - **FINANCING** - **FINANCIAL INCENTIVES**	- TECHNICAL ASSISTANCE & TRAINING EVENTS FOR PROVIDERS - DHHS LICENSING ACTIVITIES - PROVIDER PROGRAM IMPROVEMENT ACTIVITIES	- PROGRAM STAFF COMPLETE PROFESSIONAL DEVELOPMENT PROGRAMS / EVENTS - NUMBER OF LICENSED PROGRAMS ENROLLED IN QRS - NUMBER OF CHILDREN SERVED IN HIGH QUALITY SETTINGS - NUMBER OF PARENTS ABLE TO ACCESS HIGH QUALITY SETTINGS	- ECE PROFESSIONALS WITH HIGHER LEVELS OF EDUCATION / TRAINING - **PROGRAM QUALITY IMPROVES** - CHILDREN'S DEVELOPMENT IMPROVES - PARENTS WITH ACCESS TO HIGH QUALITY PROGRAMS.	- MAJORITY OF LICENSED PROGRAMS ENROLLED IN QRS - **PROGRAM QUALITY IMPROVES** - CHILDREN WITH SUFFICIENT EXPOSURE TO HIGH QUALITY ECE SETTINGS ARE SUCCESSFUL K-3 - PARENT(S) MAINTAIN EMPLOYMENT - FAMILY SUPPORTED IN CHILD REARING

B. Methods and Analyses

The following methods and analysis section will be presented based on the four primary data collection activities in this study. First is information about state-wide enrollment into the tiered QRIS since 2008. This information describes patterns of enrollment by Step Level, program type and geographical region. The second focus of the section will be on the data collected and analyzed from local child care programs through on-site observations. The third and fourth sections will discuss data that is collected from early care and education staff members who work in those settings where observations were done, and from parents whose children are served in those settings.

1. Sample

As of November 2011, there were approximately 1,031 licensed child care programs enrolled into Maine's QRIS. The enrollment represents over half of all eligible licensed child care programs across the state. Enrollment began in early 2008 and has continued without interruption since that time period. In 2009 a policy change was made that required child care programs in receipt of Child Care Development Fund subsidy payment for childcare to enroll in the QRIS. This represents approximately 800 (Maine DHHS, November 2011) programs state wide. For all other programs enrollment is voluntary. From these 1,031 programs University research staff randomly selected child care programs to participate in the evaluation of the QRIS.

The random selection of child care programs was done by Program Type and Step Level on a continual basis since 2008. A condition of enrollment into QRIS was agreement on the part of the provider to have their program participate in the evaluation if randomly selected. The goal was to achieve a sample size of 320 programs; divided evenly between family childcare (FCC) programs and center-based child care (CBC) programs and by QRIS Step Level. The target sample was 40 programs per Step Level for each program type (CBC or FCC), for a total of 320 programs. Included in CBCs are infant/toddler classrooms, Head Start classrooms, preschool classrooms, and school-age after care programs. Family childcare programs are inclusive of all ages of children.

Attrition has claimed 102 programs and of those, 85 sites were not able to be observed prior to their withdrawal. Another factor effecting sample size was that there were an insufficient number of programs enrolled in the QRIS at Step Four for family childcare homes. The final sample size for the study was 307 individual classroom or family child care home observations at 255 childcare programs. The breakdown of this sample by Program Type and QRIS Step Level is displayed in Table 1 below. Numbers presented below represent childcare programs and the number of observations per classroom or program conducted at each site.

Table 1 - QRIS Evaluation and Implementation Study Sample by Program (12.2011)

Program Type	Step 1	Step 2	Step 3	Step 4	Totals
CBC Sites	N=33	N=35	N=15	N=22	N=105
CBC Classrooms	N=51	N=48	N=21	N=33	N=153
HS Sites	NA	NA	N=17	N=20	N=37
HS Classrooms			N=21	N=20	N=41
FCCH Sites	N=26	N=36	N=31	N=20	N=113

As mentioned above, for each site randomly selected for the study, data was collected from both staff members and parents. University research staff contacted each program site and collected information about child care program enrollment and employees. Tables 2 and 3, below, illustrate the response rates and final sample sizes. A total of 1,478 parent surveys are used in the analysis with a 25% response rate. A total of 424 staff surveys are used in the analysis with a 49% response rate.

Table 2- QRIS Parent Survey Response Rate (12.2011)

PARENT SURVEY	PROGRAMS	SENT	RECEIVED	RESPONSE RATE
Family Child Care	113	978	370	38%
Center-Based	104	3733	920	25%
Head Start	40	1302	188	14%
TOTALS	257	6013	1478	25%

Table 3- QRIS Staff Survey Response Rate (12.2011)

STAFF SURVEY	PROGRAMS	SENT	RECEIVED	RESPONSE RATE
Family Child Care	113	175	80	46%
Center-Based	104	575	294	51%
Head Start	40	122	50	41%
TOTALS	257	872	424	49%

2. Data Collection Methods

Information about the child care programs enrolled in the QRIS and participating in the study is gathered through the QRIS application completed by the provider. This on-line application form allows the provider to self-report on the program quality standards. The database in support of the application form consists of linked administrative data sets from the state licensing database and from the Maine Roads to Quality Registry. All of this information describing the characteristics of the setting is made available to the University research staff.

Data collection for on-site observations was done at both center-based and family childcare programs using the Environment Rating Scales (ERS) (Harms et al, 2006). At each center-based childcare facility, one-third of the classrooms were observed. When observing sites with multiple classrooms serving different age groups, classrooms selected for observation reflected the different age groups proportionally. If there was an infant classroom at a site, it was always observed. There were four observation scales used for different program types and age groups; these include: ECERS-R (Early Childhood Environment Rating Scale), ITERS-R (Infant-Toddler Environment Rating Scale), SACERS (School-Age Environment Rating Scale), and FCCERS-R (Family Childcare Environment Rating Scale) (Harms et al, 2006). Figure 2 outlines the areas of program quality that each scale measures. The scores for these scales range from 1, indicating a low or minimal quality score to a 7, which indicates the highest quality rating on this measurement tool.

Figure 2- Program Quality Scale Measures

ITERS-R	FCCERS-R	ECERS-R	SACERS
Space and Furnishings	**Space and Furnishings**	**Space and Furnishings**	**Space and Furnishings**
Indoor space	Indoor space used for child care	Indoor space	Indoor space
Furniture for routine care and play	Furniture for routine care, play, and learning	Furniture for routine care, play and learning	Space for gross motor activities
Provision for relaxation and comfort	Provision for relaxation and comfort	Furnishings for relaxation and comfort	Space for privacy
Room arrangement	Arrangement of indoor space for child care	Room arrangement for play	Room arrangement
Display for children	Display for children	Space for privacy	Furnishings for routine care
	Space for privacy	Child-related display	Furnishings for learning and recreational activities
		Space for gross motor play	Furnishings for relaxation and comfort
		Gross motor equipment	Furnishings for gross motor activities
			Access to host facilities
			Space to meet personal needs of staff
			Space to meet professional needs of staff
Personal Care Routines	**Personal Care Routines**	**Personal Care Routines**	**Health and Safety**
Greeting/departing	Greeting/departing	Greeting/departing	Health policy
Meals/snacks	Meals/snacks	Meals/snacks	Health practices
Nap	Nap/rest	Nap/rest	Emergency and safety policy
Diapering/toileting	Diapering/toileting	Toileting/diapering	Safety practice
Health practices	Health practices	Health practices	Attendance
Safety practices	Safety practices	Safety practices	Departure
			Meals/snacks
			Personal hygiene
Listening and Talking	**Listening and Talking**	**Language-Reasoning**	**Special Needs Supplementary Items**
Helping children understand language	Helping children understand language	Books and pictures	Provisions for exceptional children
Helping children use language	Helping children use language	Encouraging children to communicate	Individualization
Using books	Using books	Using language to develop reasoning skills	Multiple opportunities for learning and practicing skills
		Informal use of language	Engagement
			Peer interactions
			Promoting communication
Activities	**Activities**	**Activities**	**Activities**
Fine motor	Fine motor	Fine motor	Arts and crafts
Active physical play	Art	Art	Music and movement
Art	Music and movement	Music/movement	Blocks and construction
Music and movement	Blocks	Blocks	Drama/theater
Blocks	Dramatic play	Sand/water	Language/reading activities
Dramatic play	Math/number	Dramatic play	Math/reasoning activities
Sand and water play	Nature/science	Nature/science	Science/nature activities
Nature/science	Sand and water play	Math/number	Cultural awareness
Use of TV, video, and/or computer	Promoting acceptance of diversity	Use of TV, video, and/or computers	
Promoting acceptance of diversity	Use of TV, video, and/or computer	Promoting acceptance of diversity	
	Active physical play		
Interaction	**Interaction**	**Interaction**	**Interactions**
Supervision of play and learning	Supervision of play and learning	Supervision of gross motor activities	Greeting/departing
Peer interaction	Provider-child interaction	General supervision of children	Staff-child interactions
Staff-child interaction	Discipline	Discipline	Staff-child communication
Discipline	Interactions among children	Staff-child interactions	Staff supervision of children
		Interactions among children	Discipline
			Peer interactions
			Interactions between staff and parents
			Staff Interaction
			Relationship between program staff and classroom teachers
Program Structure	**Program Structure**	**Program Structure**	**Program Structure**
Schedule	Schedule	Schedule	Schedule
Free play	Free play	Free play	Free choice
Group play activities	Group time	Group time	Relationship between program staff and program host
Provisions for children with disabilities	Provisions for children with disabilities	Provisions for children with disabilities	Use of community resources

3. Use of Environmental Rating Scales in State and National Studies of Child Care Quality

Several studies of child care quality, including two conducted in Maine, have utilized the Environmental Rating Scales to measure variations in quality across settings. The following table outlines these studies and provides a comparison to Maine's use of the scales.

Table 4- Maine QRIS Use of Environmental Rating Scales Compared to Other Studies

	Marshall, N. et al., 2004a	Marshall, N. et al., 2004b	Barnett, 2003	Cassidy, D. et al., (2005)	Bryant, D. et al., (2002)	Maxwell, K. et al., (2009)	Fiene, R., (2000)	Lahti, M. et al., (2011)
ECERS or ECERS-R	90 preschool programs in Maine sampled. Mean overall score 4.23	N/A	10 studies in multiple states. Mean overall score less than 5	1313 preschool classrooms in North Carolina sampled. Mean overall score 5.16	180 preschool classrooms in North Carolina sampled. Mean overall score 4.3 in 1994, 4.5 in 1996, and 4.6 in 1999	N/A	N/A	129 preschool classrooms in Maine sampled. Mean overall score 4.24
FCCERS or FCCERS-R	N/A	90 family child care homes in Maine sampled. Mean overall score 4.26	N/A	N/A	N/A	155 family child care homes in Georgia sampled. Mean overall score 2.5	N/A	113 family child care homes in Maine sampled. Mean overall score 3.62
ITERS or ITERS-R	N/A	N/A	N/A	N/A	N/A	N/A	27 sites in South Central Pennsylvania. Mean overall score 4.2 in 1996, 3.9 in 2000	45 infant/toddler classrooms in Maine sampled. Mean overall score 3.75

The first study, “The Cost and Quality of Full Day, Year-round Early Care and Education in Maine: Preschool Classrooms,” sampled community-based centers serving preschoolers on a full-day, full-year basis, and concluded that for center-based programs,

> Over three-quarters of the classrooms did not meet the Good benchmark on Personal Care Routines. While 40% of classrooms met Minimal standards of tending to meals, naps, and toileting in a non-punitive manner and in a way that met the needs of most of the children, over 20% of centers were rated as Inadequate (Marshall et al., 2004a).

Additionally, "The average score on the Activities scale was just under 4 – indicating Minimal quality. Only 21% of the classrooms had a score of Good or better. Over half, 53%, of the classrooms were rated as Minimal or between Minimal and Good and 26% were rated as Inadequate.” Finally, “A total of 35% of the classrooms met the Good benchmark (5 or higher)” on the Space and Furnishings Subscale” (Marshall et al., 2004a).

The second study, **“**The Cost and Quality of Family Child Care in Maine,” which sampled licensed family child care homes, concluded that for family child care programs,

> While keeping children safe and healthy was one of the most important goals for licensed providers, 62% of providers failed to meet the Minimal benchmark in Basic Care. They did not always wash their hands after diapering or toileting of children did not ensure that children washed their hands for meals or after using the bathroom, did not keep the kitchen area and toys disinfected, and did not adequately childproof their home from common hazards (Marshall et al., 2004b).

Additionally, "The average score on the Activities subscale was 4.26; 27% of the providers had a score of Good or better, 61% were rated between Minimal and Good," and "12% were rated as Inadequate." Finally, according to this study, "Only 30% of Maine's family child care homes met the Good benchmark for quality" on their overall observation scores" (Marshall et al., 2004b).

In a paper published in the National Institute for Early Education Research: Preschool Policy Matters journal, "High-Quality Preschool: Why We Need it and What it Looks Like," researchers at Rutgers University concluded that **"**In 10 studies across multiple states, the average overall ECERS score did not reach 5.0" (Barnett, 2003).

In a study conducted by researchers in the Department of Human Development and Family Studies at the University of North Carolina at Greensboro, data was collected from 1313 preschool classrooms across the state (Cassidy et al., 2005). It should be noted that according to North Carolina's Star Rated License standards, only programs that are trying to receive a higher "Star Rating" (4 or 5 out of 5) are required to be assessed using the ECERS-R; therefore, programs included in the study represent, overall, a higher level of quality than those not in study. Results of the study showed that "Subscale means ranged from 3.89 to 6.02 with the lowest scoring subscales being Personal Care Routines and Space and Furnishings, and the highest subscale averages occurring in Parents and Staff and Program Structure" (Cassidy et al., 2005). Furthermore,

> Most classrooms scored very low on both Item #7—space for gross motor (mean = 3.05) and Item #14—safety practices (mean = 2.50). For Item #7—69% of classrooms scored a 1 or 2 and on Item #14—84% of classrooms scored a 1 or 2… Often, the low scores on these items have to do with inadequate surfacing under climbing equipment indoors and outdoors. Therefore, it appears that items 7 and 14 are not independent items, but rather one is heavily influenced by the other (Cassidy et al., 2005).

In another study conducted by the University of North Carolina, researchers focused on the effects of the state's Smart Start program on the quality of child care over a period of five years (Bryant, et al., 2002). Results of the study point to a significant increase in quality from 1994 to 1999, as measured by Environment Rating Scale scores, as well as licensing data and teacher education and turnover. It should be noted that no increase in quality was seen in the Personal Care Routine subscale scores (Bryant, et al., 2002). In 1994, the number of centers participating in the study was 167, in 1996 it was 187, and in 1999 it was 135. Over the 5 year study period, 1994 – 1999 Bryant and her colleagues found that,

> Quality improved in each dimension of classroom care and education (e.g. language/reasoning, creative activities, and gross motor) except for personal care. Although the area of social development improved, it remained the lowest subscale in 1999. Both social development and basic hand washing, toileting, and safety of children continue to need attention (Bryant, D. et al., 2002).

In 2009-10, researchers at the Frank Porter Graham Child Development Center at the University of North Carolina at Chapel Hill conducted a statewide study of randomly selected family child care homes in Georgia, collecting data on the observed quality and characteristics of these programs (Maxwell, et al., 2010). Data were collected in 155 registered family child care homes between September 2009 and April 2010. Results of the study showed that,

> Quality in Georgia's registered family child care homes was generally low. The mean total score on the *Family Child Care Environment Rating Scale-Revised* (FCCERS-R) was 2.50… slightly more than three-quarters of the programs fell into the "low" quality range, with all of the remaining programs in the "medium" quality range. No program received a FCCERS-R score in the "high" quality range (Maxwell, et al., 2010).

The last study presented, conducted by researchers at the Capital Area Early Childhood Training Institute Prevention Research Center College of Human Development at Pennsylvania State University evaluated the quality of infant care in South Central Pennsylvania (Fiene, 2000). The study involved 49 caregivers from 27 childcare centers licensed by the Department of Public Welfare and seven of the sites were accredited by the National Association for the Education of Young Children (Fiene, 2000). Fiene and his colleagues offer the following descriptive data:

> All the items that scored at a minimal level in the 2000 study are areas of concern and where additional training is needed. However, in comparing these results with the 1996-1997 statewide evaluation study, 27 items showed a drop off in their scores. In other words the level of quality in infant child care programs is dropping. Of particular concern are the health and safety areas which have dropped by over 1 full point, this is a very significant drop in a short 4 year period. Supervision of daily activities showed a large drop approaching a full point. Other general curriculum areas include music and movement, pretend play, water and sand play have dropped off substantially as well. There are some areas that did show improvement which is encouraging, such as: cultural awareness, blocks, and active physical play (Fiene, 2000).

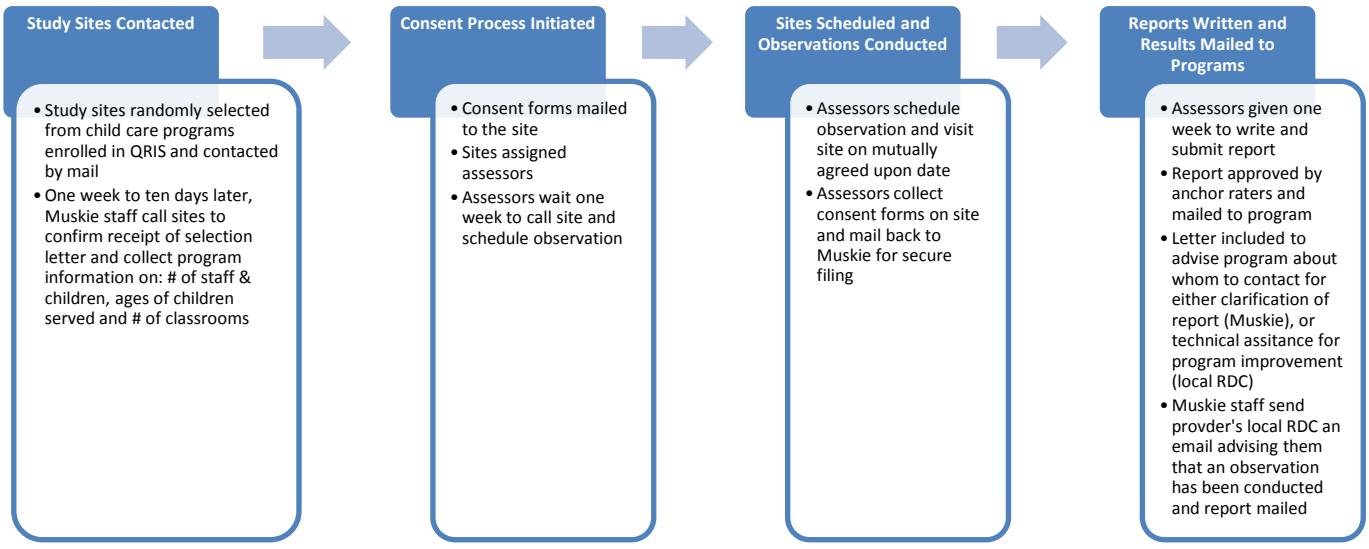
The above studies provide both a rationale for the use of ERS as a measure of child care quality in this evaluation, and also provide context for Maine's QRIS Evaluation and Implementation Study findings. Further discussion of Maine ERS mean scores compared to these studies will be provided in the Results section of this paper. The following section outlines the process for training staff to conduct observations, maintaining reliability to the tool, and providing feedback to programs.

4. Process for Site Visit and Feedback to Programs

Three "anchor" assessors were trained at the Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill to administer the scales. Reliability was maintained by annual reliability checks with Dr. Thelma Harms, one of the scales' authors. Anchor assessors maintained at least 85% reliability to the scales' author. Additionally, there were a number of assessors- independent contractors- who conducted observations throughout the state. Each of these assessors was trained by one of the anchors and inter-rater reliability was maintained by anchor and assessor conducting observations together after each assessor completed 10-12 observations on a particular scale. Each independent assessor maintained at least 80% reliability to anchor assessors during the study. (Please see the Appendix for the report depicting the assessors' reliability and mean scores per scale.) There have been a total of eleven assessors that have worked on the study since its inception. Of those, eight have conducted 20 observations or more. Additionally, each assessor was required to complete the CITI Training in Social and Behavioral Research Using Human Subjects, as mandated by the University's Institutional Review Board.

Sites selected to be part of the study were initially contacted by mail. The process of data collection for the on-site observations is outlined in Figure 3 below.

Figure 3: Process for Site Visit and Feedback to Programs



For the staff and parent surveys, information was provided to the University by program staff concerning enrollment and staff size. Both questionnaires were mailed out to the program for distribution to parents and program staff. Program staff questionnaires were coded to track response rates and the parent survey process was anonymous; there was no follow up with parents. All parents

served by the program were provided a questionnaire to complete. Stamped, self addressed envelopes were provided so that respondents could return questionnaires directly to the University. The questionnaire used in this study was adapted from a parent survey developed by researchers at the Bounce Learning Network for the national Educare program evaluation. The parent questionnaire was developed based on recommendations from Weber et al, (2009). The parent questionnaire includes a scale that measures parents' perceptions of quality developed by Emlen (2000). See the Appendix for copies of the staff questionnaires and parent questionnaire.

5. Data Analysis

Data analysis was primarily quantitative and sought to respond to the following statistical research questions:

- Are there differences in enrollment into the QRIS by program type and or state region (geography)?
- Are there differences in progress up the tiers of the QRIS by program type and or state region?
- Are there differences in the types of Standards that programs must meet to advance the next level by program type, Step Level and or region?
- Is there a relationship between ERS mean scores at the classroom or program (FCCH) level and QRIS Step Level?
- Is there a relationship between scale scores on the parent and staff surveys and QRIS Step Level considering program type?

The null hypothesis for this study is that Step Level makes no difference in terms of scores related to program quality and/or staff and parent perceptions related to program quality. The focus on measuring the outputs of the rating process, meaning the assigned Step Level for the program, is one that attempts to validate that there is a difference in Step Levels, with increasing quality at programs on higher Step or tier levels. The tiered system is designed based on this assumption - that programs at higher Steps on the QRIS are of higher quality. This is a critical assumption as financial incentives are greater at higher Step Levels. More importantly, there is evidence that higher quality programs are related to positive child outcomes particularly for children living in the most disadvantaged homes and communities (Curby et al., 2009; Early et al., 2006; and Mashburn et al., 2008).

Interim results have been provided regularly to state agency leadership, policy makers and to early care and education specialists who provide training and technical assistance state-wide. In addition, University research staff meets with child care teaching staff and family child home owners/directors to review results and explain the QRIS evaluation process. Data presentations are primarily descriptive and provide information about the status of enrollments and summaries of the ERS findings. In addition, reports focus on the QRIS standards that are in need of being met by region of the state to encourage training and technical assistance providers to target their training in support of QRIS implementation.

C. Limitations

The study design is limited to making statements about relationships between variables and the design does not allow for comparisons between programs enrolled in the QRIS and those not enrolled. This type of design does not contain a counter-factual and is therefore often considered a weaker quantitative type of design to argue for causation. While all the measures used in the study are those previously used in other large scale research projects, there were limitations to how the data was collected. For the on-site observations, those were conducted at the convenience of the provider and this process may have allowed the provider the chance to create a context that may not have been what one would see on a "typical" day at child care. For the anonymous parent questionnaires, there was not any follow up data collection so the low response rates are based on a single request for data that was made by the local provider who handed out materials for parents to complete and return to the University in a self-addressed, stamped envelope. More follow up was conducted by University staff for the staff survey, however in this case data collection was also done in collaboration with program administrative staff and not under the control of University research staff. The study design is focused on the program as the primary unit of analysis so there is no information provided related to child or family outcomes. Finally, the output of the rating process - the assigned Step Level - is based on self-report by the provider. Providers are required to have a portfolio on-site that provides evidence of how each program quality standard is met. State agency staff randomly visit providers to review the portfolios, however, this type of validation is not done by University research staff. This component of the system design means that the evaluation is reliant upon administrative data and self-report data to a large extent. So the study design does not identify, in an empirical manner, which program quality standards are actually present in the setting or the effect of a Standard or cluster of Standards on overall program quality.

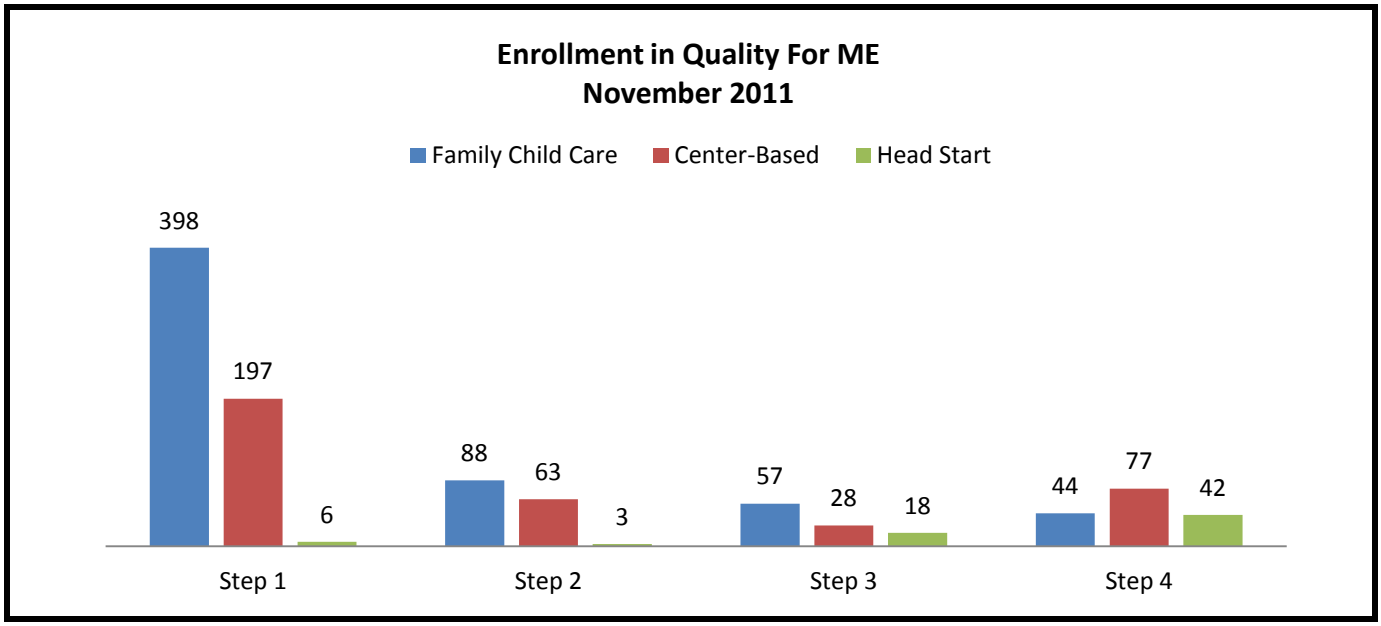
III. RESULTS

The following section contains results from the major data collection activities of this study. First, results of program enrollment into the state QRIS are provided and the information gathered about program quality standards still to be met or barriers to meeting the next Step or tier in the system. Next, information is provided analyzing the length of time it takes for a program to move from one tier or Step to the next higher Step Level. Then results from the validation of the Step Levels by program type, investigating Step Level differences using observational data. Finally, results from the parent and staff survey data will be presented. Following this Results section will be a final section discussing findings and implications for policy-making and program improvement.

A. Results - Child Care Program Enrollment to QRIS

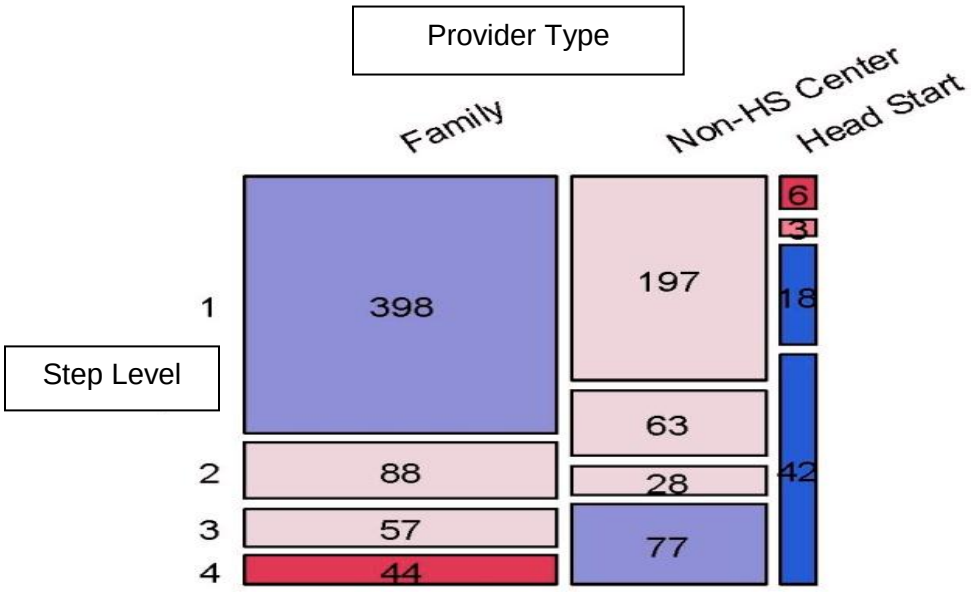
Enrollment in Quality for ME as of November 2011 is illustrated in Figure 4 below. As of November 2011, approximately 47% of licensed settings, or 1,031 programs were enrolled in Quality for ME. The majority of Family Child Care (68%) and Center-Based Child Care programs (54%) are at a Step One while the majority of Head Start programs (61%) are at Step Four.

Figure 4 – Enrollment In Quality For ME (10.2011)



The following figure illustrates the number of programs at each step by setting type. Red cells indicate disproportionately few programs, and blue cells indicate disproportionately numerous programs. As the figure demonstrates, a disproportionately small number of family child care programs are enrolled at Step Four, the highest quality step, and a disproportionately large number of Head Start programs are enrolled at Step Four.

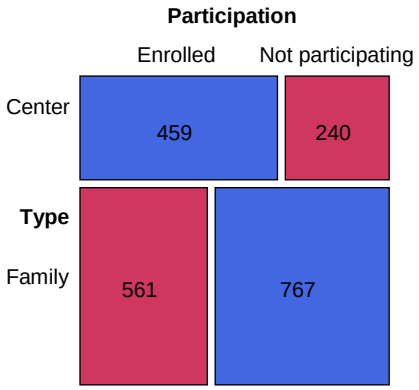
Figure 5 – Enrollment Comparing Type of Programs



B. Predicted Versus Actual Enrollment in QRIS Across Program Type

The following figures outline enrollment statewide and by region. Figure 6 indicates that centers participate in QRIS at a significantly higher rate than Family Child Care Homes: there are disproportionately many centers participating, disproportionately few centers not participating, disproportionately few Family Child Care Homes participating, and disproportionately many Family Child Care Homes participating. Figure 7 indicates that there are not major geographic differences in QRIS participation. A notable exception was in Washington County, where actual enrollment was higher than in other counties. Given Washington's mix of program types, the expected enrollment was 50%, however Washington County actually had 89% enrollment across program types. This was significantly different enrollment percentage (p=.000342).

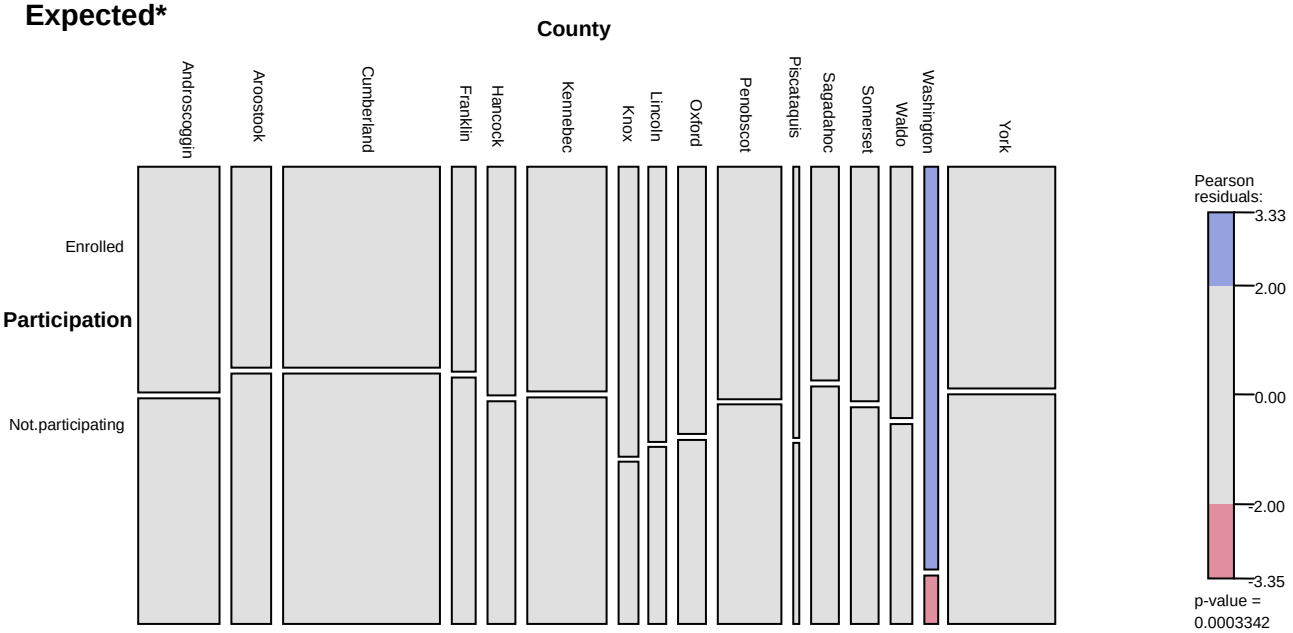
Figure 6-Statewide Participation Across Program Type, November 2011*



This model indicates that overall, 50% of Maine providers are enrolled in Quality for ME

- 66% of centers are "in"
- 42% of FCCHs are "in"

Figure 7-Model Illustrating Washington County's Enrollment as Significantly Higher than Expected*



*****These two figures pool Head Start centers with non-Head Start centers, because they draw on the licensing database, which indicates whether a program is center-based but does not indicate whether a program is Head Start.

C. Results - Quality Rating and Improvement System Standards to be Met

The following tables illustrate the most common barriers for center-based and family child care programs who are trying to move up the Steps of Quality for ME.

Table 5 - Most Frequently Cited Barriers for Center-Based Care Programs Statewide

Step Movement	Quality for ME Standard	Programs for whom this standard is a barrier in 2011
To Move from Step 3 to Step 4	Achieving national accreditation or Head Start Compliance	58.70%
To Move from Step 2 to Step 3	Parent Advisory Group	18.50%
To Move From Step 1 to Step 2	1 Lead Teacher or staff member responsible for educational programming who has completed the training on implementing the ELG's.	25.00%

When attempting to move from Step Three to Step Four the following additional barriers were cited:

- having a plan to implement a salary scale that is based upon professional qualifications and experience; 19.20% of programs attempting to move from Step Three to Step Four failed to meet this standard in 2011;
- collecting evidence at least four times a year on children's development; 15.40 % of programs attempting to move from Step Three to Step Four failed to meet this standard in 2011;
- having administrators and staff who meet the professional development requirements outlined in the Maine Roads to Quality (MRTQ) Direct Care or Administrator Career Lattice; 6.70% of programs attempting to move from Step Three to Step Four failed to meet this Quality for ME standard.

When attempting to move from Step Two to Step Three the following additional barriers were cited:

- having a parent advisory group in which opportunities are provided for parent involvement that embody the written philosophy of the parent-program relationship; 18.20% of programs attempting to move from Step Two to Step Three failed to meet this standard;
- conducting an annual DHHS approved parent survey; 14.40% of programs attempting to move from Step Two to Step Three failed to meet this standard;
- collecting evidence at least three times a year on children's development; 8.20% of programs attempting to move from Step Two to Step Three failed to meet this standard.

When attempting to move from Step One to Step Two the following additional barriers were cited:

- having at least 50% of lead teachers at a level five or above on the MRTQ Direct Care Lattice; 24.40% of programs attempting to move from Step One to Step Two failed to meet this standard;
- having a written plan for improvement; 18.50% of programs attempting to move from Step One to Step Two failed to meet this standard;
- collecting evidence at least two times a year on children's development; 13.10% of programs attempting to move from Step One to Step Two failed to meet this standard.

Table 6 - Most Frequently Cited Barriers for Family Child Care Homes Statewide

Step Movement	Quality for ME Standard	Programs for whom this standard is a barrier in 2011
To Move from Step 3 to Step 4	Provider must complete the ELG's training	45.30%
To Move from Step 2 to Step 3	Approved Parent Survey conducted annually	20.30%
To Move From Step 1 to Step 2	Complete an observation on children at least twice/year	18.60%

When attempting to move from Step Three to Step Four the following additional barriers were cited:

- having NAFCC accreditation; 31.90% of programs attempting to move from Step Three to Step Four failed to meet this standard in 2011;
- collecting evidence at least four times a year on children's development; 10.30 % of programs attempting to move from Step Three to Step Four failed to meet this standard in 2011;
- having an owner/director who holds a valid Child Development Associate (CDA) or a college degree in early childhood education or a related field; 4.30% of programs attempting to move from Step Three to Step Four failed to meet this Quality for ME standard in 2011.

When attempting to move from Step Two to Step Three the following additional barriers were cited:

- having an owner/director with a professional development plan that is prepared annually; 12.40% of programs attempting to move from Step Two to Step Three failed to meet this standard in 2011;
- conducting an annual self assessment with an evidence-based tool; 9.80% of programs attempting to move from Step Two to Step Three failed to meet this standard in 2011;
- offering at least one parent-teacher conference per year; 9.50% of programs attempting to move from Step Two to Step Three failed to meet this standard in 2011.

When attempting to move from Step One to Step Two the following addition barriers were cited:

- having an owner/director who is at level three or above on the MRTQ Direct Care Lattice; 16.70% of programs attempting to move from Step One to Step Two failed to meet this standard in 2011;

- providing an opportunity to identify strengths and weaknesses that is inclusive of staff and families; 11.80% of programs attempting to move from Step One to Step Two failed to meet this standard in 2011;
- having a written method for curriculum planning that includes planning from children's interests and skills; 11.70% of programs attempting to move from Step One to Step Two failed to meet this standard in 2011.

D. Results - Program Advancement Over Time

As mentioned above, current enrollment in the QRIS indicates that programs are clustering at the lower end of the tiered system. This is particularly true for family child care homes; of the 560 home-based type of settings, most (83%) are at the first two Step levels. This pattern has persisted over three years since enrollments began in 2008. A recent in-depth study of five state quality rating and improvement systems that were fully implemented found a similar pattern, with four of the five states reporting 40% to 76% of all programs enrolled in the lower tiers of the system (Mathematica, 2011). It is believed that programs engaged with the quality rating and improvement system have a desire to participate in quality improvement activities and to increase their tier or step level. Therefore it is important to investigate the patterns, if any, of program enrollment and movement over time. Table 6 below describes the kind of program movement that has occurred in the past three plus years of the QRIS. Approximately 80% of all programs observed during this time period did not experience an event – a move up from one Step Level to the next tier. Most programs that did move were observed to move from Step One to Step Two. In addition, it appears that more Center-based Programs moved up a tier level than Family Child Care settings.

Table 7 – Study Sample: Child Care Programs Enrolled in QRIS (n=1,118)

Setting Type	No Change in Step Level During Time Period	Move from Step One to Step Two	Move from Step Two to Step Three	Move from Step Three to Step Four	TOTALS
Center-based Care Settings (n=393)	289 (25.84%)	73 (6.5%)	20 (1.78%)	11 (.98%)	393 (35.15%)
Family Child Care Home Settings (n=651)	553 (49.46%)	54 (4.83%)	37 (3.30%)	7 (.62%)	651 (58.22%)
Head Start Programs (n=74)	47 (4.20%)	22 (1.96%)	2 (.17%)	3 (.20%)	74 (6.61%)
TOTALS (N=1,118)	889 (79.51%)	149 (13.32%)	59 (5.27%)	21 (1.87%)	1,118 (100.00%)

Survival analysis (Singer & Willett, 2003; Willett & Singer, 1993; and Kleinbaum, D.G. & Kelin, M., 2005) is used in this study as it has been shown to be superior to simple means and weighted means when analyzing the risk of a terminal event (Singer & Willett, 2003; Willett & Singer, 1993). Calculations were done using SPSS version 19.0. In this data set approximately 80% of all programs have not had an event occur as defined by a move up one Step Level or tier. This results in data that is

censored. In order to deal with this problem, sample hazard probabilities are computed in every time period regardless of censoring. Censored observations are removed from the risk set at the appropriate juncture, reducing the denominator of the hazard quotient. Table 7 that follows is a life table (Singer and Willett, 2003) that details change in Step Level histories for these 507 family child care programs and 287 center-based programs.

Table 8 – Life Table Results for Change in Step Level One to Two by *Type of Program

*Note: FCCH = Family Child Care Homes and CBC = Center-based Care Settings

	Number at Start of Interval	Censored Programs in this Interval	Programs with Potential to Increase a Step Level	Programs with Change in Step Level	Hazard Estimate – Risk of Change in Step	Survival Estimate - Cumulative Proportion Surviving at End of Interval
FCCH 0-11 Months	507	142	436	29	.01	.93
CBC 0-11 Months	287	55	259.50	24	.01	.91
FCCH 12-23 Months	336	126	273	12	.00	.89
CBC 12-23 Months	208	56	180	30	.02	.76
FCCH 24-35 Months	198	184	106	5	.00	.85
CBC 24-35 Months	122	111	66.50	3	.00	.72
FCCH 36+ Months	9	9	4.50	0	.00	.85
CBC 36+ Months	8	8	4	0	.00	.72

Table 8, column five, indicates that 95 of the 103 events or changes in Step Level from level one to two occurred during the first 23 months of enrollment. Table 8 also presents the estimated hazard and survival probabilities (Table 8, columns 6 and 7). The estimated hazard probability shows the proportion of programs in the sample at that interval still at risk of a change to Step Level (i.e., all programs that were still enrolled at the beginning of that time interval) that moved from a Step One to a Step Two and are thus categorized as a program with a change of Step Level. This type of analysis is read as the percentage of risk of experiencing the event at each specific time interval in the data set. For example, a hazard probability of .02 in column 6 of Table 8 for center-based programs at 12 – 23 months indicates that for center-based programs still in the data set at 12 – 23 months, 2% experienced the event of moving up a Step Level. One can note scanning down the remaining time intervals for

column 6, the hazard probability is extremely small. The far right column of Table 8, the survival function, presents the data in a cumulative manner, displaying the data points as the percentage of the full sample who survived (i.e., programs that did not have a change in Step Level), appropriately controlling for programs that already had a change in Step Level. At the time intervals 24 – 35 and 36+ months after enrollment, 85% of family child care home type programs and 72% of center-based type programs were still enrolled and at the Step One Level. This number can be considered a static rate of program enrollment at each tier of a quality rating and improvement system. Table 8 above appears to indicate that center-based care programs have much higher probabilities of a change in Step Level when compared to family child care homes, particularly at the 12 to 23 month period after enrollment.

Cox regression, survival analysis, was then conducted to examine the association of the two covariates or explanatory variables; type of program and regional location. This analysis was conducted on a total of 794 cases with 103 cases or programs having experienced a change in Step Level from a Step One to a Step Two. A total of 691 cases are censored and 8 cases that represent Head Start programs are omitted from the analysis as they did not have any event occurrence. Head Start programs enroll into this state's quality rating and improvement system at a higher step or tier level so are not included in the analysis. A total of 507 family child care homes and 287 center-based programs are included. As shown in Table 9, it does appear that program type is a significant contributor to how often a change in Step Level occurs and regional location does not appear to be significant.

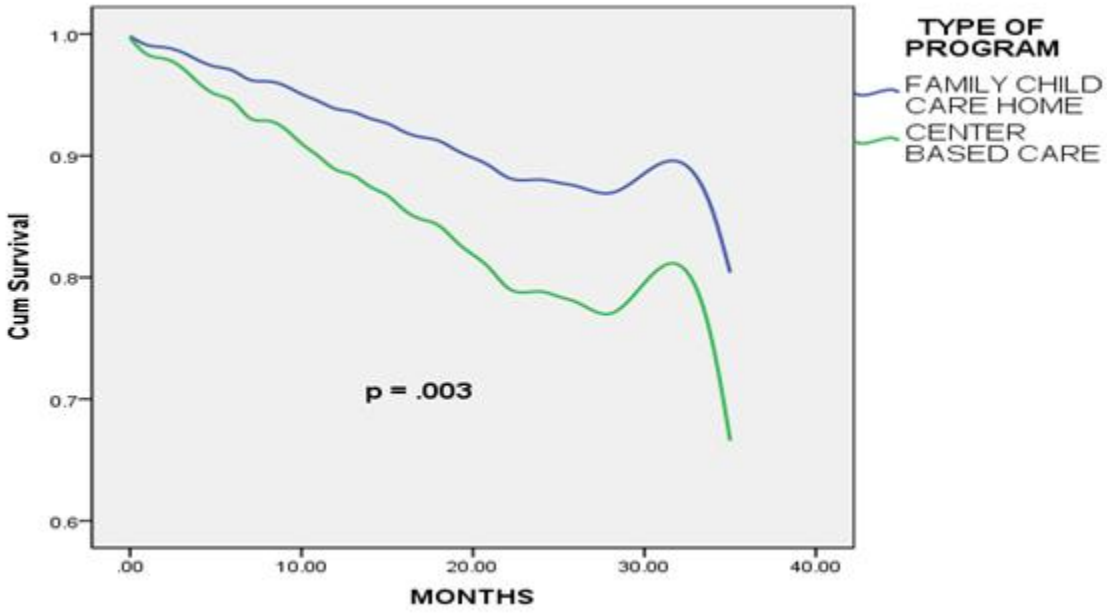
Table 9 – Cox Regression Coefficients for Change in Step Level One to Two: Type of Program and Regional Location

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PROGRAM TYPE	-.623	.206	9.130	1	.003	.536	.358	.803
RDC REGION			5.793	7	.564			
RDCRGN(1)	-1.436	1.056	1.850	1	.174	.238	.030	1.884
RDCRGN(2)	.434	.410	1.119	1	.290	1.543	.691	3.445
RDCRGN(3)	.498	.393	1.607	1	.205	1.646	.762	3.557
RDCRGN(4)	.181	.505	.128	1	.720	1.198	.446	3.221
RDCRGN(5)	.296	.437	.460	1	.498	1.344	.571	3.163
RDCRGN(6)	.318	.405	.615	1	.433	1.374	.621	3.041
RDCRGN(7)	.059	.442	.018	1	.894	1.060	.446	2.520

The Wald statistics indicate that a program's type significantly predicts whether that program will change in Step Level (p=.003), but a program's RDC region does not predict whether it will change in Step level (p=.564). The coefficient for program type -.623, is the logarithm of the hazard ratio for center-based programs compared to family child care homes. The exponential of this value is .536, indicating that center-based programs are .536 times as likely to change a Step Level as family child care homes; that is, the potential for a change in Step Level is greater for center-based programs.

Figure 8 below provides a graphic display of the survival function comparing the two program types. Center-based care programs have a significantly steeper curve illustrating that this type of program is less likely to survive or in the context of this study, more often has events of change in Step Level for these time periods.

Figure 8 – Survival Functions by Program Type Step One to Step Two Event



Similar analyses were conducted for changes in Step Levels two to three and three to four. For the analysis of program Step Level change from Step Two to three, there are a total of N=234 programs in the sample. Of these, 135 (58%) are Family Child Care Homes (FCCH), 93 (40%) are center-based care (CBC) programs and 6 (2%) are Head Start (HS) programs. For analysis of program Step Level change from Step Three to four there are N=178 programs in the sample. Of these, 81 (46%) are family child care homes, 58 (33%) are center-based care programs, and 39 (22%) are Head Start programs. Table 10 below presents the Life Table results for the survival analysis for changes in Step Level from Step Two to Three in the quality rating and improvement system.

Table 10 – Life Table Results for Change in Step Level Two to Three by *Type of Program

*Note: FCCH = Family Child Care Homes, CBC = Center-based Care and HS = Head Start Settings

	Number at Start of Interval	Censored Programs in this Interval	Programs with Potential to Increase a Step Level	Programs with Change in Step Level	Hazard Estimate – Risk of Change in Step	Survival Estimate - Cumulative Proportion Surviving at End of Interval
FCCH 0-11 Months	132	36	114	26	.02	.77
CBC 0-11 Months	92	33	75.5	8	.01	.89
HS 0-11 Months	6	3	4.5	2	.05	.56
FCCH 12-23 Months	70	25	57.5	8	.01	.66
CBC 12-23 Months	51	15	43.5	8	.02	.73
HS 12-23 Months	1	0	1	0	.00	.56
FCCH 24-35 Months	37	32	21	0	.00	.66
CBC 24-35 Months	28	20	18	3	.02	.61
HS 24-35 Months	1	1	.5	0	.00	.56
FCCH 36+ Months	5	4	3	1	.03	.44
CBC 36+ Months	5	4	3	1	.03	.41

Table 10, column six shows the estimated hazard probability for family child care homes and center-based care settings, 3% of these program types experienced moving from Step Two to Step Three after being enrolled in the quality rating system for at least 36 months. For Head Start type programs, with only six programs in this data set, 5% experienced moving from Step Two to Step Three within the first eleven months of enrollment. Different than the pattern of movement illustrated in Table 3 above, the movement from Step Two to Step Three level appears to continue through these time periods for family child care homes and center-based settings. The static rate ends at 44% for family child care homes and 41% for center-based programs.

Table 11 that follows presents the Cox regression results which indicate that neither type of program (p=.290) nor regional location (p=.195) appear to be significant in terms of explaining Step Level event occurrence between steps two and three in this quality rating system.

Table 11 – Cox Regression Coefficients for Change in Step Level Two to Three: Type of Program and Regional Location

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PROGRAM TYPE			2.473	2	.290			
TYPEPROG1(1)	-.688	.745	.852	1	.356	.503	.117	2.166
TYPEPROG1(2)	-1.014	.761	1.776	1	.183	.363	.082	1.612
RDC			9.887	7	.195			
RDC(1)	-.635	1.158	.301	1	.583	.530	.055	5.127
RDC(2)	.199	.715	.077	1	.781	1.220	.300	4.959
RDC(3)	.215	.663	.105	1	.746	1.240	.338	4.550
RDC(4)	1.263	.678	3.471	1	.062	3.537	.936	13.357
RDC(5)	.772	.655	1.391	1	.238	2.164	.600	7.807
RDC(6)	.466	.667	.487	1	.485	1.593	.431	5.893
RDC(7)	.944	.668	1.995	1	.158	2.571	.694	9.528

Figure 9 below presents the survival functions for events at this Step Level interval.

Figure 9 – Survival Functions for Program Types Step Two to Step Three Event

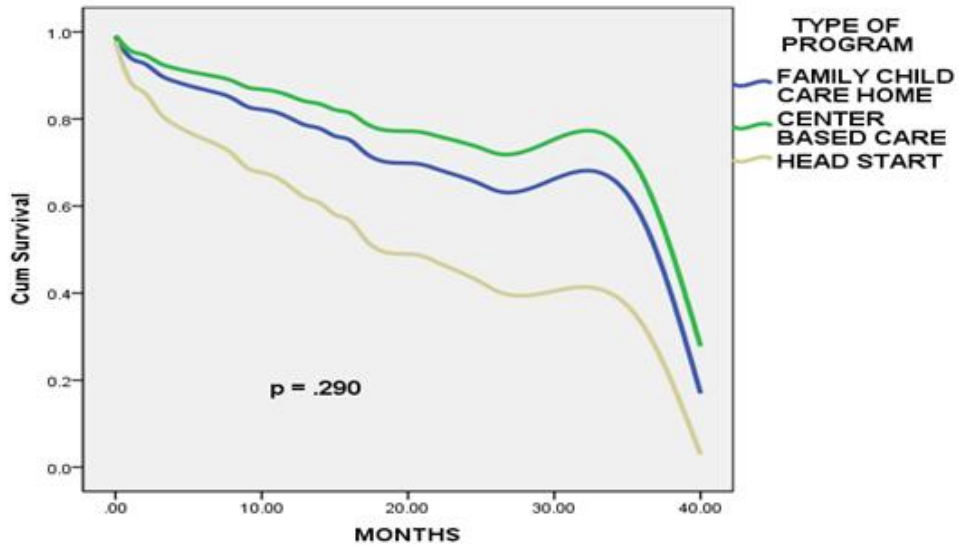


Table 12 below presents the Life Table results for the survival analysis for changes in Step Level from Step Three to four, the last and two highest tiers in the quality rating and improvement system. This data includes 177 programs of which 81 are family child care homes, 57 are center-based care and 39 are Head Start settings.

Table 12 – Life Table Results for Change in Step Level Three to Four by *Type of Program

*Note: FCCH = Family Child Care Homes, CBC = Center-based Care and HS = Head Start Settings

	Number at Start of Interval	Censored Programs in this Interval	Programs with Potential to Increase a Step Level	Programs with Change in Step Level	Hazard Estimate – Risk of Change in Step	Survival Estimate - Cumulative Proportion Surviving at End of Interval
FCCH 0-11 Months	81	22	70	9	.01	.87
CBC 0-11 Months	57	16	49	15	.03	.69
HS 0-11 Months	39	6	36	19	.06	.47
FCCH 12-23 Months	50	23	38.5	5	.01	.76
CBC 12-23 Months	26	5	23.5	8	.03	.46
HS 12-23 Months	14	1	13.5	2	.01	.40
FCCH 24-35 Months	22	17	13.5	2	.01	.65
CBC 24-35 Months	13	5	10.5	5	.05	.24
HS 24-35 Months	11	9	6.5	2	.03	.28
FCCH 36+ Months	3	3	1.5	0	.00	.65
CBC 36+ Months	3	3	1.5	0	.00	.24

Table 12, column 6 shows the estimated hazard probability and for family child care homes 1% are moving from Step Three to Step Four at each interval up to 36+ months when that rate falls to zero. For center-based care settings, this is a 3% rate until the 24 – 35 month period where that increases to 5%. For Head Start type programs, the largest rate is 6% at the 0-11 month time interval. The static rate ends at 65% for family child care homes and 24% for center-based programs. Table 13 that follows presents the Cox regression results which indicate that type of program ($p < .001$) is a significant covariate and that regional location ($p=.093$) is not a significant covariate in terms of explaining Step Level event occurrence between steps three and four in this quality rating and

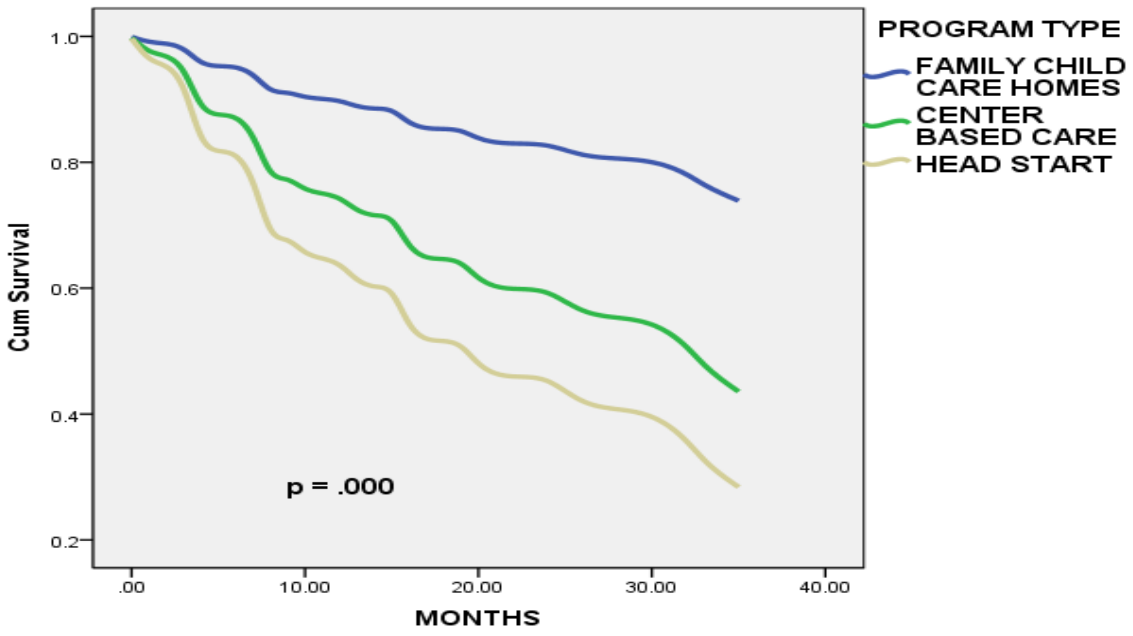
improvement system. Family child care homes appear to have a significant probability of advancing a Step Level compared to center-based and Head Start programs at this quality system interval.

Table 13 – Cox Regression Coefficients for Change in Step Level Three to Four: Type of Program and Regional Location

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PROGRAM TYPE			17.987	2	.000			
progtyp2(1)	-1.425	.341	17.433	1	.000	.240	.123	.469
progtyp2(2)	-.416	.296	1.965	1	.161	.660	.369	1.180
RDC REGION			12.239	7	.093			
RDC(1)	-10.175	345.788	.001	1	.977	.000	.000	8.251E289
RDC(2)	.444	1.170	.144	1	.704	1.559	.157	15.437
RDC(3)	1.448	.662	4.780	1	.029	4.255	1.162	15.586
RDC(4)	.635	.947	.449	1	.503	1.886	.295	12.072
RDC(5)	1.806	.641	7.947	1	.005	6.089	1.734	21.380
RDC(6)	1.267	.653	3.762	1	.052	3.550	.987	12.768
RDC(7)	1.728	.659	6.875	1	.009	5.632	1.547	20.502

Figure 10 that follows presents the survival function for program type. One can note the largest difference between the family child care homes (top line) and centers, Head Start programs.

Figure 10 – Survival Functions for Program Types Step Three to Step Four Event



D. Results - Validation of Program Quality Standards by Step Level

This section presents results that are focused on answering the general question; are their differences in quality between similar programs at different Step Levels? To measure the differences in program quality, the Environmental Rating Scale (ERS) mean score will be used as a dependent measure. The results are from a factorial ANOVA (4 x 4 x 3) to examine the effects of Step Level, ERS scale type and child care program type on the dependent variable ERS mean score (Abu-Bader, 2010). The total sample size is 307 child care classrooms. Table 14 provides the adjusted mean scores for all classrooms by Step Level. Table 15 presents adjusted mean scores for each program type by Step Level.

Table 14 – Adjusted Mean ERS Scores for All Classrooms by Step Level

	STEP ONE	STEP TWO	STEP THREE	STEP FOUR
Mean Scores for All Classrooms (N=307)	3.52 – 4.02 (SE = .125) (n=77)	3.71 – 4.09 (SE=.098) (n=84)	3.68 – 4.35 (SE=.170) (n=73)	4.14 – 4.58 (SE=.141) (n=73)

Table 15 – Adjusted Mean ERS Scores for All Classrooms by Step Level and Program Type

	STEP ONE	STEP TWO	STEP THREE	STEP FOUR
Family Child Care Homes	2.99 – 3.60 (SE=.155) (n=26)	3.25 – 3.77 (SE=.132) (n=36)	3.50 – 4.06 (SE=.142) (n=31)	3.73 – 4.42 (SE=.177) (n=20)
Center-based Settings	3.62 – 4.24 (SE=.158) (n=51)	3.79 – 4.27 (SE=.123) (n=48)	3.74 – 4.90 (SE=.293) (n=21)	4.10 – 4.75 (SE=.166) (n=33)
Head Start Settings			3.20 – 4.17 (SE=.246) (n=21)	4.11 – 4.81 (SE=.177) (n=20)

The following results in Table 16 describe the adjusted mean scores by each ERS scale and Step Level. For the ECERS-R scores presented, these are classroom level observations and include both non- Head Start and Head Start type of programs. The ITERS-R total also includes three Head Start classrooms in the data, and there are only a total of 20 SACERS observations.

Table 16 – Adjusted Mean Scores for the Environmental Rating Scales by Scale Type and Step Level

	STEP ONE	STEP TWO	STEP THREE	STEP FOUR
FCCERS-R (n= 113)	2.98 – 3.60 (SE=.155) (n=26)	3.25 – 3.77 (SE=.132) (n=36)	3.50 – 4.06 (SE=.142) (n=31)	3.73 – 4.42 (SE=.177) (n=20)
ECERS-R Center-based (n=130)	3.92 – 4.45 (SE=.134) (n=35)	3.82 – 4.44 (SE=.158) (n=25)	3.94 – 4.49 (SE=.141) (n=32)	4.16 – 4.66 (SE=.128) (n=38)
ITERS-R (n= 45)	3.09 – 3.99 (SE=228) (n=12)	3.13 – 3.99 (SE=.219) (n=13)	3.15 – 4.25 (SE=.279) (n=9)	3.57 – 4.50 (SE=..238) (n=11)
SACERS (N= 19)	3.29 – 4.84 (SE=.395) (n=4)	3.91 – 4.89 (SE=.250) (n=10)	2.95 – 6.06 (SE=.790) (n= 1)	4.08 – 5.63 (SE=.395) (n=4)

The results of the factorial ANOVA show an overall significant difference between Step Level and ERS mean score at the classroom / setting level (F 5.02; df=3, 307; p .002). Results of the post hoc Bonferroni test show a significant difference between Step One and Step Four programs (p = .001) and between Step Two and Step Four programs (p=.001). The total variance of the mean ERS score explained by Step Level was only 5%, indicating weak relationships between the variables. The observed power of this variable was .91 with the desired power set at .80. Figure 11 below illustrates the mean ERS score at each Step Level.

Figure 11 – ERS Mean Score by Step Level for All Classrooms

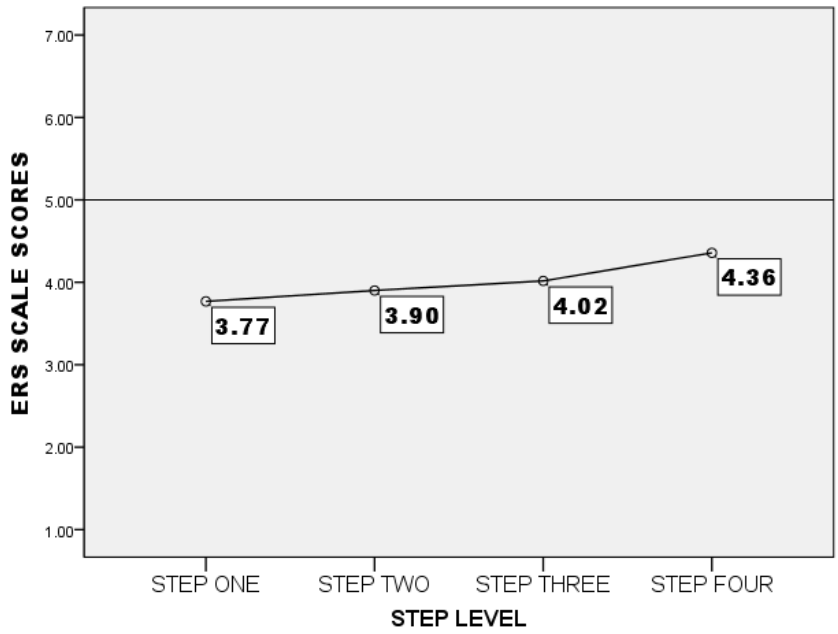


Figure 12 below presents a graph of the ERS mean scores by Step Level and program type. These mean scores are a result of the factorial ANOVA and are within the range of mean scores

presented in Table 14 above. Multiple comparisons (Bonferroni) of the program type mean scores indicated a difference only between the Family Child Care Home scores and the Center-based scores ($p < .001$). The Family Child Care Home mean scores appear lower at each Step Level than the Center-based setting scores. There did not appear to be any significant differences at Step Three or Four between the Center-based and Head Start type settings (p=.974).

Figure 12 – ERS Mean Scores by Step Level and Program Type

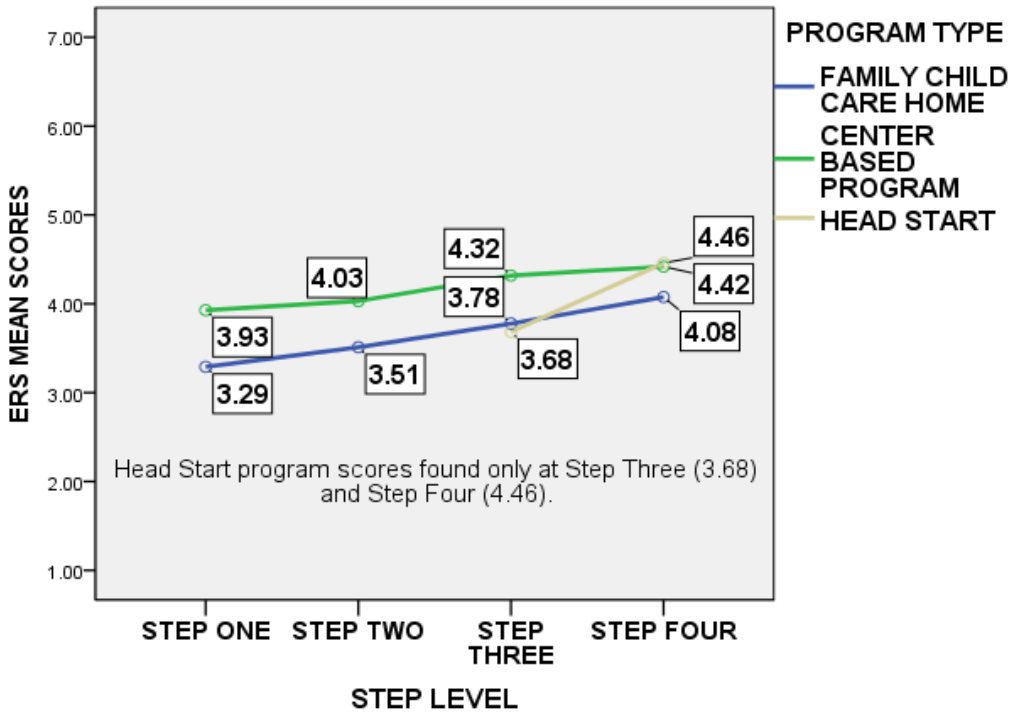


Figure 13 below presents results for the ERS mean scores by Step Level and type of ERS Scale. Multiple comparisons (Bonferroni) appear to indicate differences between the Family Child Care Home (FCCERS-R) scale and the pre-school (ECERS-R), infant-toddler (ITERS-R) and school age (SACERS) scales. It appears that the Family Child Care Home and Infant/Toddler scale scores are similar to each other and the mean scores for these two scales are lower than for the pre-school and school age setting scales.

Figure 13 – ERS Mean Scores by Step Level and Type of Scale (ERS)

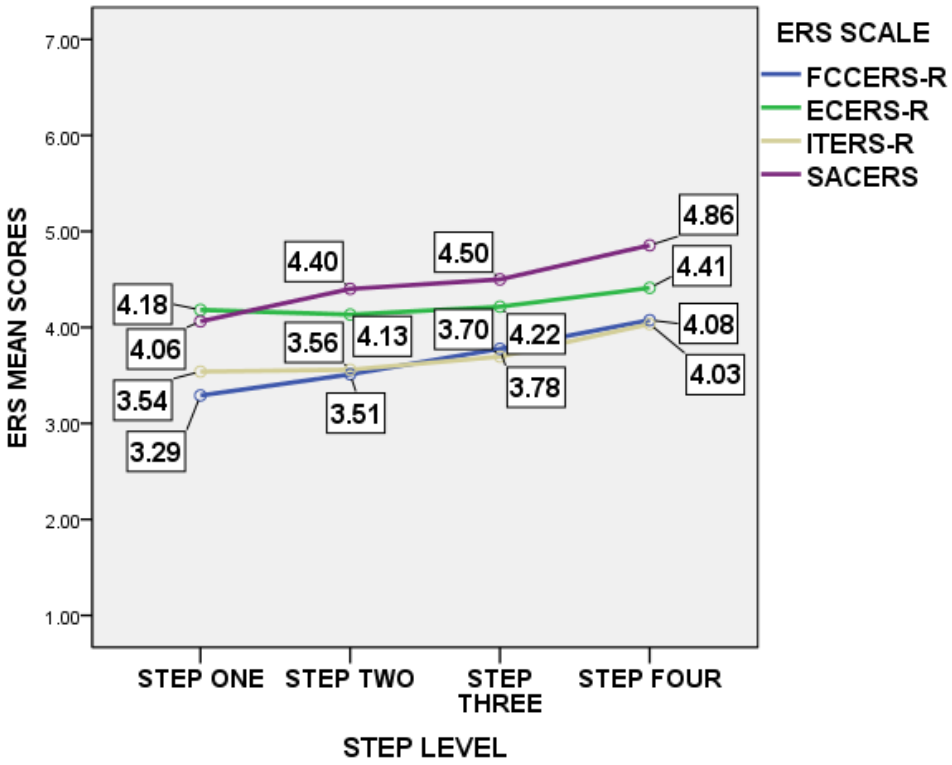


Table 17 below presents a summary for this factorial ANOVA.

Table 17 – Factorial ANOVA Summary

Source of Variance	SS	df	MS	F	p
Step Level	9.40	3	3.135	5.019	.002
ERS Scale	8.788	2	4.394	7.036	.001
Program Type	1.532	1	1.532	2.453	.118
Step Level ERS Scale Interaction	2.024	6	.337	.540	.778
Step Level Program Type Interaction	.043	1	.043	.069	.793
ERS Scale and Program Type Interaction	1.833	1	1.833	2.935	.088
Step Level, ERS Scale and Program Type Interaction	.000	0			
Error	179.863	288	.625		
Total	224.685	306			

F. Results - Subscale Level Results – Areas of Focus for Improvement

Results of Maine's QRIS study are consistent with other studies conducted around the country; in particular, indoor and outdoor space, health and safety, and access to materials were identified as the areas requiring the most improvement (Bryant et al., 2002; Fiene, 2000; Marshall et al., 2004a, Marshall et al., 2004b; Maxwell et al., 2009).

Each Environment Rating Scale is broken up into Subscales, Items, and Indicators which collectively determine the overall ERS score for a particular classroom observation.
The Subscale scores are averaged to come up with an overall score from one-seven; one is considered inadequate and seven is considered excellent. Each Subscale score is an average of the Item scores therein. Each Item is scored from one - seven, using a series of Indicators that measure quality within that Item; such as the length of time a particular material is accessible to children or the number of adults and children who wash their hands before eating. Please see Figure 3 on page 10, which outlines areas of program quality that each of the four scales measure, broken down into Subscales, Items, and Indicators.

Subscale

In the Environment Rating Scales, a Subscale is a large category that includes a number of like Items, which together allow an assessor to evaluate a particular aspect of the early childhood environment, such as Space and Furnishings, Personal Care Routines, and Materials. The average of the Item scores within a particular Subscale determines the Subscale score.

Item

Each Item within a Subscale represents one facet of that part of the early childhood environment. For example, the Subscale Personal Care Routines includes Items that evaluate practices involved in greeting and departing, meals and snacks, diapering and toileting, nap/rest, and health and safety practices. Within each of the two lowest scoring Subscales, the two lowest scoring Items were identified and included in the charts in the following pages.

Indicator

An Indicator is a criterion within an Item that must be met in order to advance to the next level of quality. Within each item, there are indicators at the 1, 3, 5, and 7 levels; where 1 = Inadequate, 3 = Fair, 5 = Good, and 7 = Excellent. Each Item is comprised of 10-15 Indicators and only when the criteria for each Indicator are met can full credit be awarded for an Item. Credit at a particular Indicator is dependent upon whether or not certain requirements are met; such as staff and children practicing proper hand washing, staff providing children with access to materials, staff encouraging children to use logical reasoning to solve problems, and staff allowing children ample time for indoor and outdoor free play. Only when all the criteria for each indicator are met at the 1, 3, 5, and/or 7 levels can classrooms advance to the next level of quality within that item. For each of the low scoring items, the Indicators which prevented classrooms from achieving a higher Item score are identified by QRIS Step Level.

ECERS-R: Centers

The following figure (ECERS-R), provides a visual display of mean scores for each subscale, mean scores by QRIS Step Level for the two lowest scoring subscales - Space and Furnishings and Personal Care Routines, the two lowest scoring items within the subscales, and the indicators beyond which classrooms did not advance to the next level of quality. In the table in the upper right hand corner of this page, Item 7, Space for Gross Motor Play, assesses the safety and appropriateness of indoor and outdoor space used for children to stimulate the development of gross motor skills. Item 8, Gross Motor Equipment, evaluates the safety and appropriateness of equipment – both portable and stationary – used by children for gross motor play. Item 10, Meals/Snacks, looks at the sanitary conditions associated with eating (such as hand washing, table washing, and food preparation), as well as the nutritional value of food served, and the atmosphere in which meals/snacks take place (such as social interaction among children). Finally, Item 14, Safety Practices, assesses the safety conditions inside the classroom and out. This includes the safety and appropriateness of space, equipment, furnishings, materials and other, non-childcare related items such as cleaning products or other toxic chemicals that may be within children's reach, as well as the adequacy of adult supervision.

Figure 14 - Dashboard for ECERS-R: Centers Including Lowest Subscales

The table below represents mean subscale scores for all observations conducted in preschool classrooms at center-based childcare facilities (Head Start programs excluded), arranged from the highest scoring to the lowest scoring sub..

Sub Scale Mean Scores

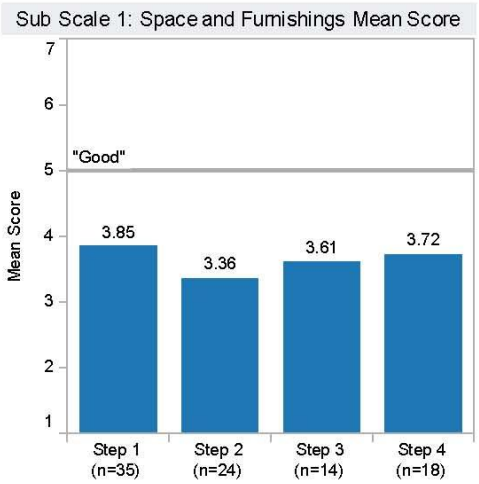
	Mean ECERS-R Score Across All Classrooms (N=91)
Subscale 3: Language-Reasoning	5.37
Subscale 5: Interactions	5.19
Subscale 6: Program Structure	5.13
Subscale 4: Activities	4.30
Subscale 1: Space and Furnishings	3.66
Subscale 2: Personal Care Routines	2.60

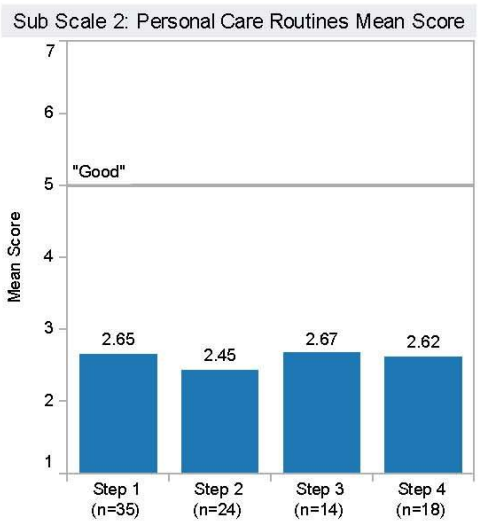
The table below represents the two lowest scoring items from each of the two lowest scoring subscales, by percentage of classrooms at Step Levels 1-4 scoring less than a 4; i.e., not advancing beyond the Minimal level of quality for that item.

Lowest Scoring Items

Sub Scale, Item	Step One (n=35)	Step Two (n=24)	Step Three (n=14)	Step Four (n=18)
Subscale 1– Space and Furnishings	2.13- 5.57 (SD=.99)	2.00- 5.13 (SD=.72)	2.38- 5.00 (SD=.84)	2.00- 5.12 (SD=.81)
Item 7 – Space for Gross Motor Play	94% (n=33)	96% (n=23)	86% (n=12)	100% (n=18)
Item 8 - Gross Motor Equipment	71% (n=25)	83% (n=20)	71% (n=10)	83% (n=15)
Subscale 2 - Personal Care Routines	1.33 - 4.50 (SD=.61)	1.33- 4.00 (SD=.51)	2.00- 3.83 (SD=.43)	1.67- 3.60 (SD=.60)
Item 10 - Meals/ Snacks	100% (n=35)	100% (n=24)	100% (n=14)	94% (n=17)
Item 14 - Safety Practices	97% (n=34)	96% (n=23)	100% (n=14)	100% (n=18)

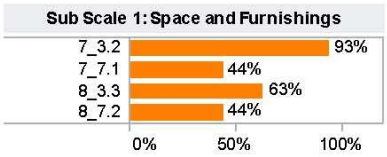
The two charts below depict mean subscale scores by QRIS Step Level for the two lowest scoring subscales, Space and Furnishings and Personal Care Routines.

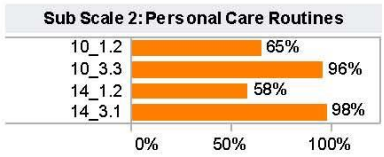


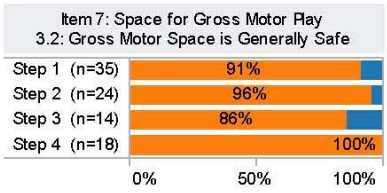


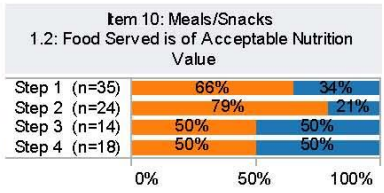
The last series of charts on this page represent the indicators within the lowest scoring items, beyond which a majority of classrooms were not able to advance to the next level of quality. Each graph represents a particular indicator and each bar represents, by QRIS Step Level, the percentage of classrooms that did not meet the criteria set forth in that indicator.

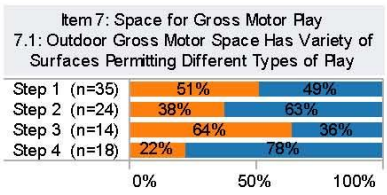
Key: Met / Did Not Meet

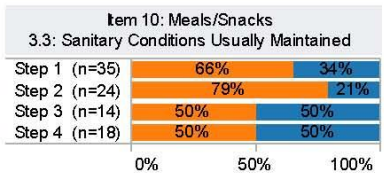


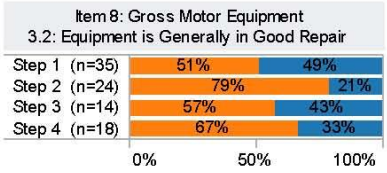


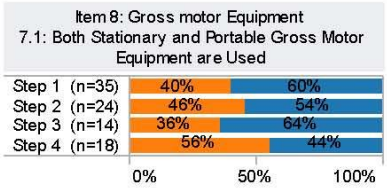












ITERS-R

The following figure (ITERS-R), provides a visual display of mean scores for each subscale, mean scores by QRIS Step Level for the two lowest scoring subscales - Personal Care Routines and Activities, the two lowest scoring items within the subscales, and the indicators beyond which classrooms did not advance to the next level of quality. In the table in the upper right hand corner of this page, Item 7, Meals/Snacks, assesses conditions associated with eating , such as hand washing, table washing, and food preparation, as well as the nutritional value of food served, and the atmosphere in which meals/snacks take place (such as social interaction among children). Item 9, Diapering/Toileting, evaluates the sanitary conditions of diapering and toileting, such as following proper diapering procedures (i.e., disposing of diapers in a lined, hands-free trash can and washing and sanitizing diapering surface), hand washing, and supervision of toileting. Item 16, Active Physical Play, addresses children's access to indoor and/or outdoor space and materials for gross motor play, the frequency at which children are able to engage in active play, and the safety and repair of space and equipment. Finally, Item 17, Art, looks at children's access to appropriate (safe and non-toxic) art materials, how frequently materials are provided, and whether children can choose to participate or not in art activities. Please note, there are three Head Start programs included in the total number of ITERS-R observations; the classroom scores were not sufficiently different from the non-Head Start scores to warrant a separate page.

Figure 15- Dashboard for ITERS-R Including Lowest Subscales

The table below represents mean subscale scores for all observations conducted in infant and/or toddler classrooms at center-based childcare facilities (three Head Start programs *included*), arranged ..

Sub Scale Mean Scores

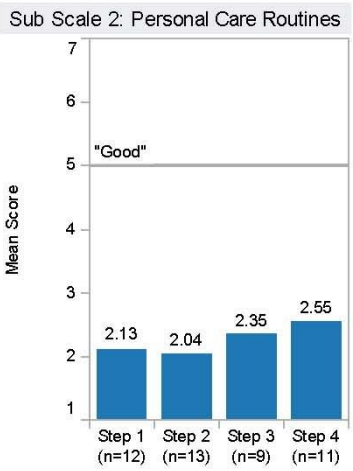
	Mean ITERS-R Score Across All Classrooms (N=45)
Subscale 5: Interactions	5.09
Subscale 3: Listening and Talking	4.98
Subscale 6: Program Structure	4.01
Subscale 1: Space and Furnishings	3.86
Subscale 4: Activities	3.68
Subscale 2: Personal Care Routines	2.26

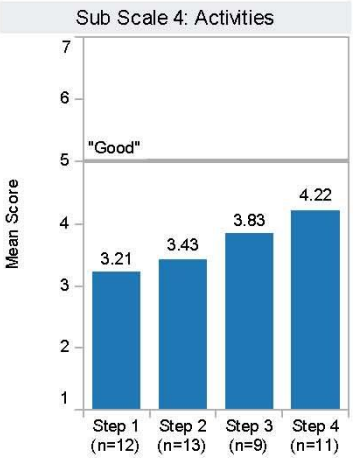
The table below represents the two lowest scoring items from each of the two lowest scoring subscales, by percentage of classrooms at Step Levels 1-4 scoring less than a 4; i.e., not advancing beyond the Minimal level of quality for that item.

Lowest Scoring Items

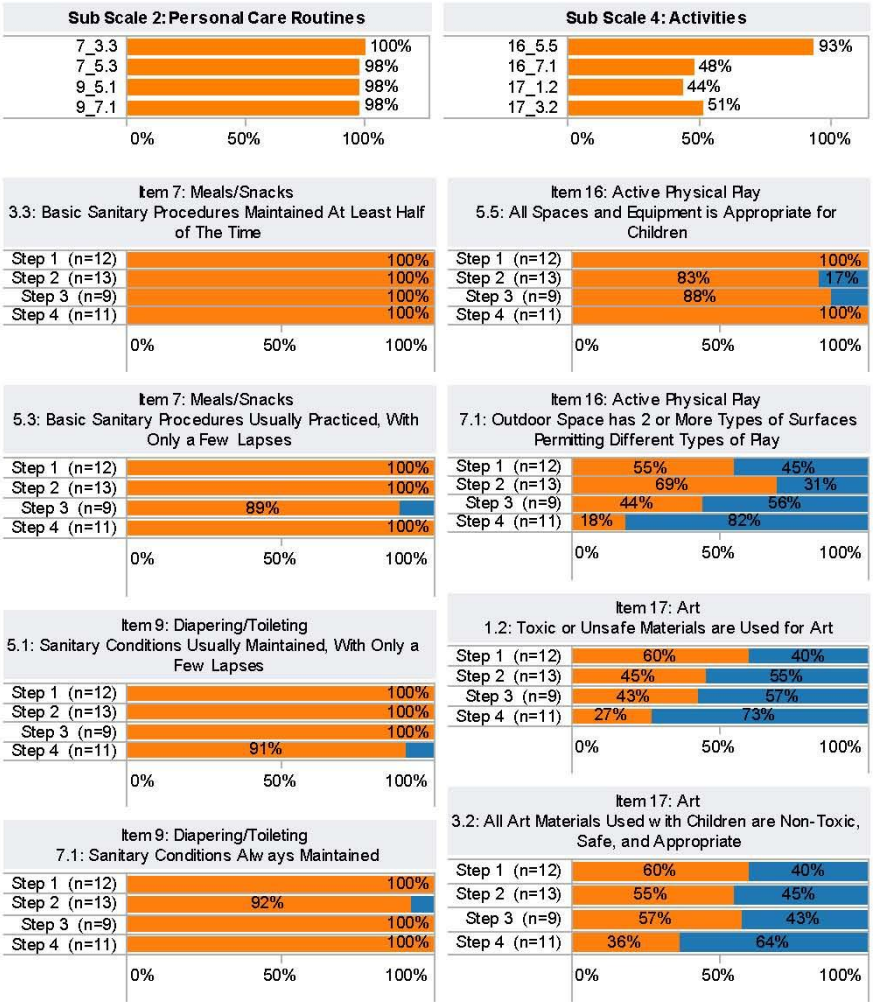
Sub Scale, Item	Step One (n=12)	Step Two (n=13)	Step Three (n=9)	Step Four (n=11)
Subscale 2 – Personal Care Routines: Mean Score	1.81 – 2.45 (SD=.5)	1.81 – 2.26 (SD=.37)	1.93 – 2.77 (SD=.55)	1.91 – 3.18 (SD=.95)
Item 7 – Meals/Snacks	100% (n=12)	100% (n=13)	100% (n=9)	100% (n=11)
Item 9 – Diapering/ Toileting	100% (n=12)	100% (n=13)	100% (n=9)	100% (n=11)
Subscale 4 - Activities: Mean Score	2.53 – 3.89 (SD=1.08)	2.75 – 4.11 (SD=1.13)	2.78 – 4.88 (SD=1.37)	3.45 – 4.99 (SD=1.14)
Item 16 – Active Physical Play	67% (n=8)	77% (n=10)	78% (n=7)	55% (n=6)
Item 17 - Art	80% (n=8)	55% (n=6)	57% (n=4)	45% (n=5)

The two charts below depict mean subscale scores by QRIS Step Level for the two lowest scoring subscales, Personal Care Routines and Activities.





The last series of charts on this page represent the indicators within the lowest scoring items, beyond which a majority of classrooms were not able to advance to the next level of quality. Each graph represents a particular indicator and each bar represents, by QRIS Step Level, the percentage of classrooms that did not meet the criteria set forth in that indicator.



SACERS

The following figure (SACERS), provides a visual display of mean scores for each subscale, mean scores by QRIS Step Level for the two lowest scoring subscales – Space and Furnishings and Health and Safety, the two lowest scoring items within the subscales, and the indicators beyond which classrooms did not advance to the next level of quality. In the table in the upper right hand corner of this page, Item 5, Furnishings for Routine Care, looks at whether or not there is enough furniture for meals/snacks, nap (if applicable), and storage of children's possessions. Item 7, Furnishings for Relaxation and Comfort, assesses the sufficiency of softness in the environment, such as whether or not the space has rugs/carpeting and whether the children have access to soft furnishings such as cushions and soft, child-sized chairs. Item 15, Safety Practices, evaluates the safety of indoor and outdoor space and equipment, the regular practice of emergency procedures such as evacuation drills, and whether younger children are protected from older children during active play. Finally, Item 18, Meals/Snacks, addresses conditions associated with eating , such as hand washing, table washing, and food preparation, as well as the nutritional value of food served, and the atmosphere in which meals/snacks take place (such as social interaction among children).

Figure 16- Dashboard for SACERS Including Lowest Subscales

The table below represents mean subscale scores for all observations conducted in school-age aftercare programs at center-based childcare facilities and public schools, arranged from the highest scoring to the lowest scoring subscales.

Sub Scale Mean Scores

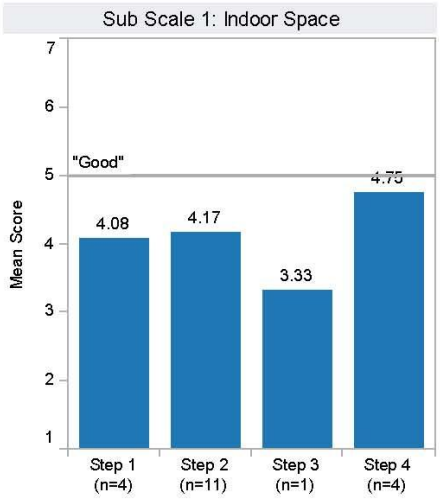
	Mean SACERS Score Across All Classrooms (N=20)
Subscale 4: Interactions	5.53
Subscale 5: Program Structure	5.08
Subscale 7: Special Needs Supplementary Items	4.80
Subscale 3: Activities	4.23
Subscale 1: Space and Furnishings	4.17
Subscale 2: Health and Safety	3.54

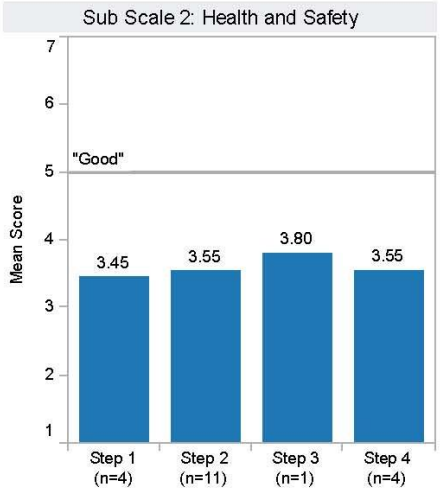
The table below represents the two lowest scoring items from each of the two lowest scoring subscales, by percentage of classrooms at Step Levels 1-4 scoring less than a 4; i.e., not advancing beyond the Minimal level of quality for that item

Lowest Scoring Items

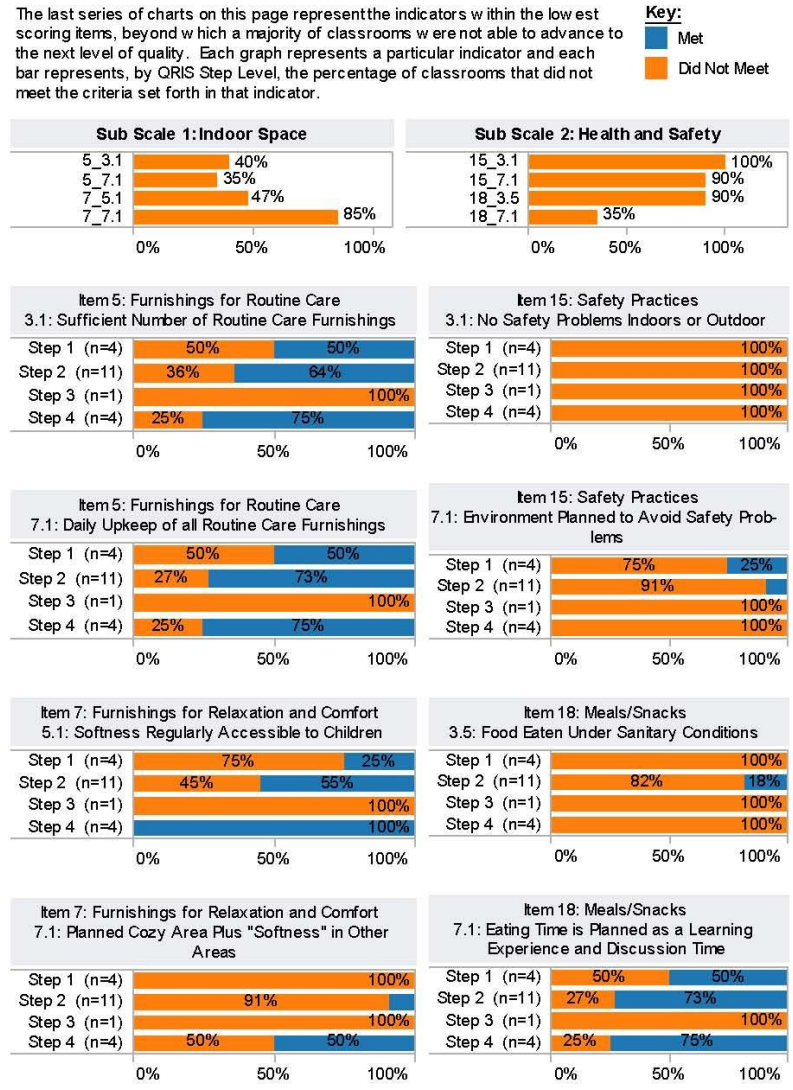
Sub Scale, Item	Step One (n=4)	Step Two (n=10)	Step Three (n=1)	Step Four (n=4)
Subscale 1 – Indoor Space: Mean Score	3.24 – 4.91 (SD=.52)	3.35 – 4.53 (SD=.83)	3.33	2.24 – 7.00 (SD=1.56)
Item 5 – Furnishings for Routine Care	75% (n=3)	40% (n=4)	100% (n=1)	75% (n=3)
Item 7 – Furnishings for Relaxation and Comfort	75% (n=4)	50% (n=5)	100% (n=1)	50% (n=2)
Subscale 2 – Health and Safety: Mean Score	2.22 – 4.68 (SD=.77)	2.87 – 3.97 (SD=.77)	3.8	1.67 – 5.43 (SD=1.18)
Item 15 – Safety Practices	100% (n=4)	100% (n=10)	100% (n=1)	100% (n=4)
Item 18 – Meals/Snacks	100% (n=4)	100% (n=10)	100% (n=1)	100% (n=4)

The two charts below depict mean subscale scores by QRIS Step Level for the two lowest scoring subscales, Space and Furnishings and Health and Safety.





The last series of charts on this page represent the indicators within the lowest scoring items, beyond which a majority of classrooms were not able to advance to the next level of quality. Each graph represents a particular indicator and each bar represents, by QRIS Step Level, the percentage of classrooms that did not meet the criteria set forth in that indicator.



FCCERS-R

The next figure (FCCERS-R), provides a visual display of mean scores for each subscale, mean scores by QRIS Step Level for the two lowest scoring subscales - Personal Care Routines and Activities, the two lowest scoring items within the subscales, and the indicators beyond which classrooms did not advance to the next level of quality. In the table in the upper right hand corner of this page, Item 9, Meals/Snacks, assesses conditions associated with eating , such as hand washing, table washing, and food preparation, as well as the nutritional value of food served, and the atmosphere in which meals/snacks take place (such as social interaction among children). Item 10, Diapering/Toileting, evaluates the sanitary conditions of diapering and toileting, such as following proper diapering procedures (i.e., disposing of diapers in a lined, hands-free trash can and washing and sanitizing diapering surface), hand washing, and supervision of toileting. Item 24, Promoting Acceptance of Diversity, looks at children's access to books, pictures, and materials representing various categories of diversity; whether materials show diversity in a positive way, and whether activities that promote the understanding of diversity ever occur as part of the program. Finally, Item 26, Active Physical Play, addresses children's access to indoor and/or outdoor space and materials for gross motor play, the frequency at which children are able to engage in active play, and the safety and repair of space and equipment.

Figure 17- Dashboard for FCCERS-R Including Lowest Subscales

The table below represents mean subscale scores for all observations conducted family childcare homes, arranged from the highest scoring to the lowest scoring subscales.

Sub Scale Mean Scores

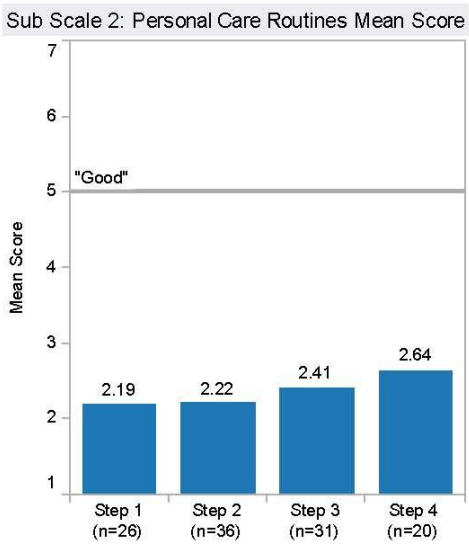
	Mean FCCERS-R Score (N=113)
Subscale 5: Interactions	5.17
Subscale 3: Listening and Talking	4.79
Subscale 6: Program Structure	4.57
Subscale 1: Space and Furnishings	3.33
Subscale 4: Activities	3.29
Subscale 2: Personal Care Routines	2.34

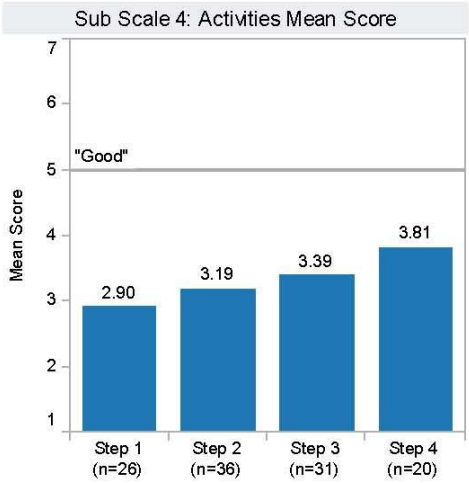
The table below represents the two lowest scoring items from each of the two lowest scoring subscales, by percentage of classrooms at Step Levels 1-4 scoring less than a 4; i.e., not advancing beyond the Minimal level of quality for that item.

Lowest Scoring Items

Sub Scale, Item	Step One (n=26)	Step Two (n=36)	Step Three (n=31)	Step Four (n=20)
Subscale 2 – Personal Care Routines: Mean Score	1.90 – 2.49 (SD=.73)	2.05 – 2.38 (SD=.49)	2.21 – 2.61 (SD=.55)	2.28 – 3.00 (SD=.76)
Item 9 – Meals/Snacks	100% (n=26)	100% (n=36)	100% (n=31)	95% (n=19)
Item 10 – Diapering/ Toileting	100% (n=26)	100% (n=36)	97% (n=30)	95% (n=19)
Subscale 4 – Activities: Mean Score	2.58 – 3.22 (SD=.79)	2.85 – 3.53 (SD=1.0)	3.01 – 3.78 (SD=1.04)	3.35 – 4.27 (SD=.98)
Item 24 – Promoting Acceptance of Diversity	96% (n=25)	78% (n=28)	74% (n=23)	60% (n=12)
Item 26 – Active Physical Play	100% (n=26)	97% (n=35)	100% (n=36)	95% (n=19)

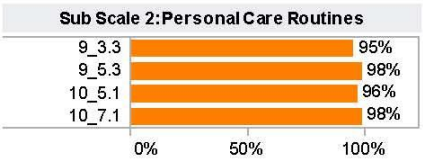
The two charts below depict mean subscale scores by QRIS Step Level for the two lowest scoring subscales, Personal Care Routines and Activities.

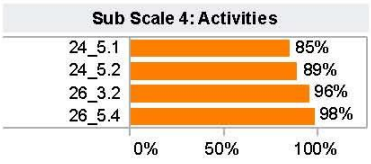


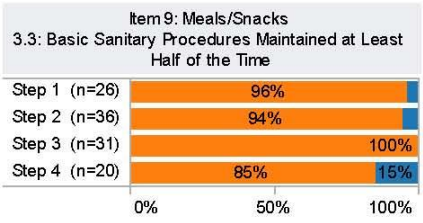


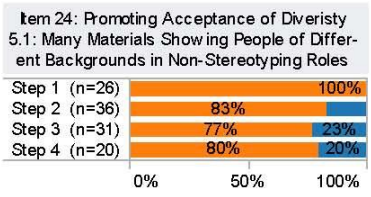
The last series of charts on this page represent the indicators within the lowest scoring items, beyond which a majority of classrooms were not able to advance to the next level of quality. Each graph represents a particular indicator and each bar represents, by QRIS Step Level, the percentage of classrooms that did not meet the criteria set forth in that indicator.

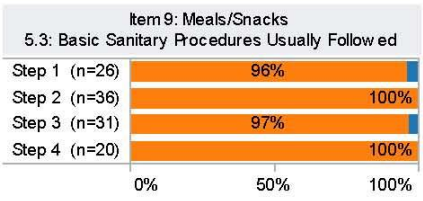
Key: Met / Did Not Meet

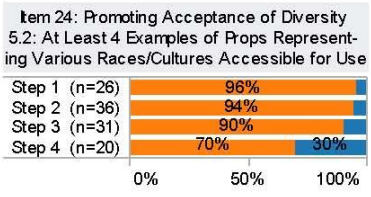


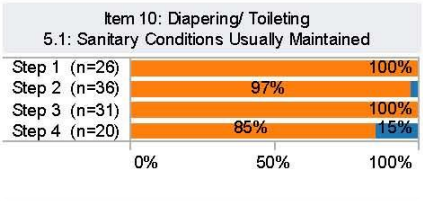


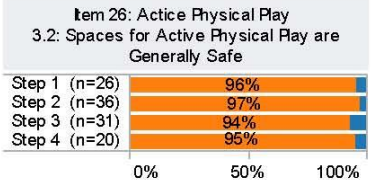


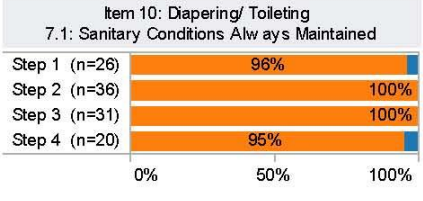


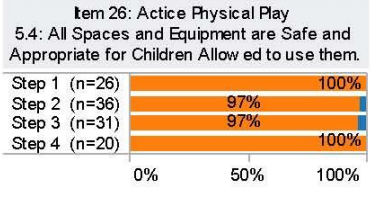












ECERS-R: Head Start

The next and final figure in this series (ECERS-R: Head Start), provides a visual display of mean scores for each subscale, mean scores by QRIS Step Level for the two lowest scoring subscales - Space and Furnishings and Personal Care Routines, the two lowest scoring items within the subscales, and the indicators beyond which classrooms did not advance to the next level of quality. In the table in the upper right hand corner of this page, Item 7, Space for Gross Motor Play, assesses the safety and appropriateness of indoor and outdoor space used for children to stimulate the development of gross motor skills. Item 8, Gross Motor Equipment, evaluates the safety and appropriateness of equipment – both portable and stationary – used by children for gross motor play. Item 10, Meals/Snacks, looks at the sanitary conditions associated with eating (such as hand washing, table washing, and food preparation), as well as the nutritional value of food served, and the atmosphere in which meals/snacks take place (such as social interaction among children). Finally, Item 14, Safety Practices, assesses the safety conditions inside the classroom and out. This includes the safety and appropriateness of space, equipment, furnishings, materials and other, non-childcare related items such as cleaning products or other toxic chemicals that may be within children's reach, as well as the adequacy of adult supervision.

Figure 18- Dashboard for ECERS-R: Head Start Including Lowest Subscales

The table below represents mean subscale scores for all observations conducted at center-based childcare facilities (Head Start programs excluded), arranged from the highest scoring to the lowest scoring subscales.

Sub Scale Mean Scores

	Mean ECERS-R Score Across All Classrooms (N=38)
Subscale 3: Language-Reasoning	5.38
Subscale 6: Program Structure	5.32
Subscale 5: Interactions	4.86
Subscale 4: Activities	4.51
Subscale 1: Space and Furnishings	3.85
Subscale 2: Personal Care Routines	2.50

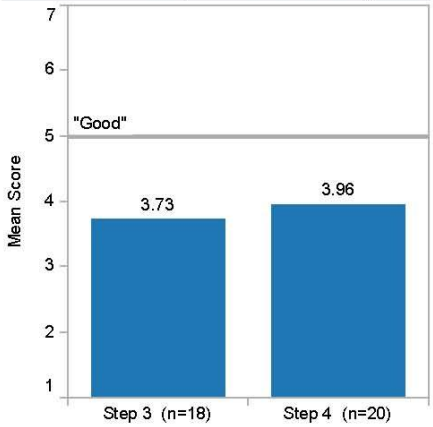
The table below represents the two lowest scoring items from each of the two lowest scoring subscales, by percentage of classrooms at Step Levels 1-4 scoring less than a 4; i.e., not advancing beyond the Minimal level of quality for that item.

Lowest Scoring Items

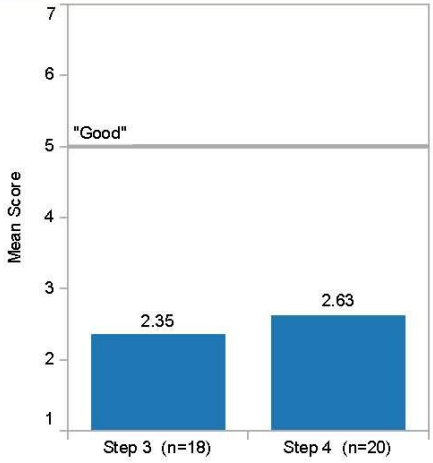
Sub Scale, Item	Step Three (n=18)	Step Four (n=20)
Subscale 1 - Space and Furnishings: Mean Score	1.88-5.13 (SD=.91)	2.38-5.88 (SD=1.07)
Item 7 – Space for Gross Motor Play	100% (n=18)	100% (n=20)
Item 8 - Gross Motor Equipment	72% (n=13)	55% (n=11)
Subscale 2 - Personal Care Routines: Mean Score	1.40– 3.17 (SD=.46)	1.20-4.33 (SD=.72)
Item 10 - Meals/ Snacks	100% (n=18)	100% (n=20)
Item 14 - Safety Practices	100% (n=18)	100% (n=20)

The two charts below depict mean subscale scores by QRIS Step Level for the two lowest scoring subscales, Space and Furnishings and Personal Care Routines.

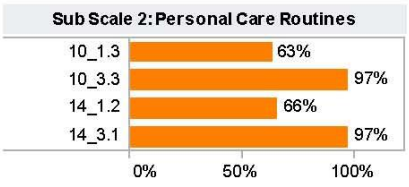
Sub Scale 1: Space and Furnishings

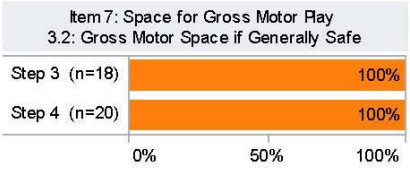


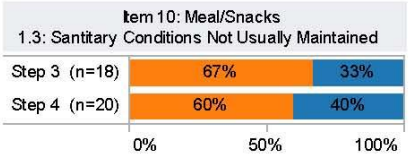
Sub Scale 2: Personal Care Routines

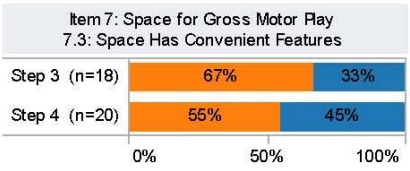


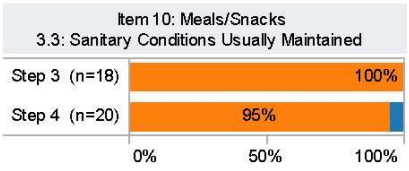
The last series of charts on this page represent the indicators within the lowest scoring items, beyond which a majority of classrooms were not able to advance to the next level of quality. Each graph represents a particular indicator and each bar represents, by QRIS Step Level, the percentage of classrooms that did not meet the criteria set forth in that indicator.

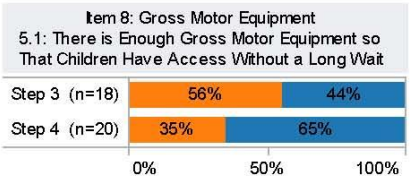


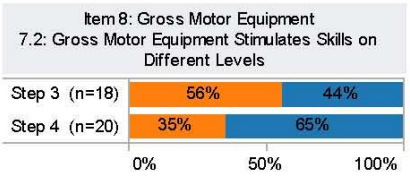












G. Results - Parent and Staff Perceptions of Program Quality

1. Parent Survey Results

The first set of results will focus on the anonymous parent survey. Based on results as of October 2011, the response rate is approximately 26% or N = 1, 478 participants. This is the result of data collection for 40 months with approximately N=380 child care programs across the state. Approximately 18% of all respondents are served in a family child care based setting, 67% served in a child care center and 15% served in a Head Start setting. In terms of Step Level categories; 23% of all respondents have children enrolled in a Step One program, 25% enrolled in a Step Two program, 24% enrolled in a Step Three program and 29% enrolled in a Step Four program. Participants are asked to consider one child as they complete the questionnaire and the average age for the child is 48 months; just one-quarter of the children are between the ages of 0 – 31 months. Approximately 12% of the participants report that their child has a "special need". For this group of respondents 53% of the children are male. 8% of these respondents report that their child regularly has out of home care in another setting for on average 15 hours per week. In addition, 24% report that their child has a different care arrangement in the summer months. These parents report that their child spends on average 27 hours a week in the regular child care setting, and have been enrolled in this setting for an average of 18 months. Respondents report an annual, median level of household income of $45,000; the bottom quartile is with household income of $0 - $14, 007.00. The majority, 81%, of respondents report that they live in two parent households. Approximately 23% (n=400) of all respondents report that they do receive some sort of governmental assistance to help pay for child care. The average (median) amount of time was reported (n=1,917) as 30 minutes.

The questionnaire was designed to collect information in three areas; (1) some information on household characteristics and use of child care arrangements, (2) report on the kinds of supports / materials the child care program was providing parents in relation to the standards of the QRIS, and (3) gather information on the parent's perception of the quality of care. In order to try to hear from parents about the kinds of supports they were getting from the provider, the following items are used:
Given a handbook that describes the program.
Given information about government money available to help pay for childcare services.
Given information about government health insurance programs for me and for my child (ren)/family.
Given information about local health or human services that may be helpful for me and for my child(ren)/family.
I was given information in a language that I understand.
I am told about my child's progress in a language that I understand and in ways that are respectful to my family and me.
Program has a parent advisory/involvement group
Program offers regular parent-teacher conferences at least twice per year
Program does a survey with parents at least once a year
Program has regular opportunities for parent involvement
The program offers daily written communications about your child's day

For the parental perceptions of quality of care, a 15 item scale is used that was originally developed by Emlen et al (2000). The items are located on a scale from 1 to 5 with 5 = Always.

My child feels safe and secure in care.
The caregiver (provider) is warm and affectionate towards my child.
It's a healthy place for my child.
My child is treated with respect.
My child is safe with this caregiver.
My child gets a lot of individual attention.
My caregiver and I share information.
My caregiver is open to new information and learning.
My caregiver shows that she knows a lot about children and their needs.
The caregiver handles discipline matters easily without being harsh.
My child likes the caregiver.
My caregiver is supportive of me as a parent.
There are a lot of creative activities going on.
It's an interesting place for my child.
My caregiver is happy to see my child.

The following table provides information about this scale from Emlen's report and from our use of the 15-item scale.

Table 18 – Emlen's (2000) 15-item Scale Quality of Care Reported by Parents

	Mean	SD	N	Alpha
Emlen et al (2000)	53.56	(6.28)	862	.91
Maine QRIS Study (10.2011)	68.66	(8.12)	1, 478	.94

In addition to this scale, two general questions are asked of parents:

Would you change your present childcare arrangements for this child if you could?
Overall, how would you rate the quality of this childcare setting for your child?

The next set of tables present interim results in response to the questions asking parents about the kinds of supports/services they are getting from the child care program. Each question is listed with the percentage responding "YES" by Step Level. Then additional information is provided in regards to differences by program type. This program type reporting is analyzed with a chi-square test to see if program type differences are occurring more so than by chance ($p \leq .05$). Please note for these results the inference is limited to this group of respondents.

Table 19 – Percent All Respondents "YES" Receive Supports / Services

Item	Percent "YES"	Program Type Analysis by Step Level FCC – Family Child Care CBC – Center-based Care HS – Head Start
Given a handbook that describes the program. (n=1,766)	93%	At Step One, 84% of parents served by FCC reported getting a handbook compared to 92% of those served by CBC (p=.014). At Step Three, 88% of FCC reported getting a handbook compared to 96% of CBC and 98% of HS programs (p=.007). No differences noted for Steps Two and Four program types.
Given information about government money available to help pay for childcare services. (n=1,753)	49%	At Step Four, 49% of parents served by FCC were given information about government funding compared to 62% for CBCs and 65% of HS programs (p=.038).
Given information about government health insurance programs for me and for my child(ren)/family. (n=1,746)	31%	At Step Three, 36% of parents served by FCCs and 33% of parents served by CBCs report receiving information about government health insurance programs, while 64% of those served by HS receive this type of information (p<.001). The same kinds of differences are evident at the Step Four level; FCC 20%, CBC 39% and HS 70%.
Given information about local health or human services that may be helpful for me and for my child(ren)/family. (n=1,752)	49%	At Step One, 40% of parents served by FCCs receive this information compared to 28% of those served by CBCs (p=.027). At the Step Three level; FCC 51%, CBC 54% and HS 85% (p=.000). Similar at Step Four, FCC 51%, CBC 58%% and HS 88% (p<.001).
I was given information in a language that I understand. (n=1,758)	98%	No differences by program type.

Of interest is that for those respondents who report that they do receive some sort of government subsidy to help pay for child care, results are:

- 92% given a program handbook.
- 70% given information about government money available to help pay for child care services.
- 48% given information about government health insurance programs for self and or child.
- 68% given information about local health and or human services that may be helpful for self and or child.
- 99% given information in a language they can understand.

Table 20 – Percent All Respondents "YES" Receive Supports / Services

Item	Percent "YES"	Program Type Analysis by Step Level FCC – Family Child Care CBC – Center-based Care HS – Head Start
I am told about my child's progress in a language that I understand and in ways that are respectful to my family and me. (n=1,763)	96%	No program / Step differences.
Program has a parent advisory/involvement group. (N=1,750)	47%	Differences at each Step Level, and for all Step Levels only 15% of parents served by FCC programs reporting advisory/involvement groups, compared to 50% for centers and 89% for HS programs.
Program offers regular parent-teacher conferences at least twice per year. (n=1,757)	62%	Differences evident at Steps One, Three and Four levels. For all Step Levels 46% of parents served by FCC programs reporting that they offer parent-teacher conferences twice a year, compared to 61% for centers and 96% for HS programs.
Program does a survey with parents at least once a year. (n=1,754)	57%	Differences are evident at Steps Three and Four, and for all Step Levels 49% parents served by FCC programs report a survey is done compared to 54% of centers and 86% of HS settings.
Program has regular opportunities for parent involvement (n = 1,761)	79%	Differences are evident at Steps One, Three and Four, and for all Step Levels 70% parents served by FCC programs report regular opportunities for parent involvement compared to 80%% of centers and 93% of HS settings.
The program offers daily written communications about your child's day. (n = 1,752)	46%	Differences are evident at Steps Three and Four, and for all Step Levels 46% parents served by FCC programs report that they offer daily written communication about a child's day compared to 48% of centers and 41% of HS settings.

Of interest is that for those respondents who report that they do receive some sort of government subsidy to help pay for child care, results are:

- 97% told about child's progress in understandable language and in a respectful manner.
- 57% aware that program has a parent advisory/involvement group.
- 74% aware that program offers regular parent-teacher conferences at least twice a year.
- 29% aware of parent surveys conducted by the program.
- 85% report that program has regular opportunities for parent involvement.
- 52% report that program offers daily written communications about child's day.

The next set of results is focused on how parents perceive the quality of the child care program. The total summary score from the 15 item Emlen scale (2000) apparently is not correlated to Step Level rating (Pearson's r=.010, p=.687). The program Step Level rating is correlated with a few items from the 15 item Parent Quality scale. Those items are:

- It's a Healthy Place for My Child (Pearson's r = .076, p=.002).
- My Caregiver Shows the She Knows a Lot about Children and their Needs (Pearson's r=.068, p=.005).
- There are a Lot of Creative Activities Going On (Pearson's r=.072, p=.001).
- It's an Interesting Place for My Child (Pearson's r = .080, p=.001).

Other items near to significance are:

- My Child is Treated with Respect (Pearson's r = .046, p=.057).
- My Caregiver is Open to New Information and Learning (Pearson's r=.048, p=.055).
- My Caregiver is Happy to See My Child (Pearson's r = .048, p=.085).

Table 21 below presents the mean scores from the summary score on the Parent Quality scale. It appears as though there is little difference in parent's perceptions of quality when comparing Step Levels for these respondents.

Table 21 – Mean Scores by Step Level: Parent Quality Scale

	N	Mean	SD	SE	95% CI Lo	95% CI Hi
Step One	485	68.56	8.36	.379	67.61	69.10
Step Two	421	68.64	8.11	.395	67.87	69.42
Step Three	347	69.54	7.19	.386	68.79	70.30
Step Four	502	68.37	8.48	.378	67.63	69.12
Total	1,755	68.66	8.12	.194	68.29	69.05

Table 22 below presents the mean scores from the summary score on the Parent Quality scale by program type. It does appear that there may be differences in parent's perceptions of quality when comparing types of programs for these respondents.

Table 22 – Mean Scores by Program Type: Parent Quality Scale

	N	Mean	SD	SE	95% CI Lo	95% CI Hi
FCCH	449	70.79	6.20	.294	70.22	71.37
CBC	1346	68.81	8.08	.220	68.38	69.24
HS	207	66.82	9.05	.629	65.58	68.06
TOTALS	2002	60.05	7.88	.176	68.70	69.40

The following are results from more general items that focus on a parent's perceptions of program quality:

- Would you change your present child care arrangements for this child if you could?
    - For all respondents, 12% indicated that yes they would change if they could. This did not appear to be different based on Step Level.
    - For program type there may be a difference as only 6% of parents served in family child care based settings said yes, compared to 14% of those served in centers and 12% of those served in Head Start programs.
    - For those respondents who report receiving government subsidy to help pay for child care, there does not appear to be any difference with 11% of those receiving subsidy saying yes compared to 12% who do not receive subsidy.
- Overall rating of child care program:
    - 98% of respondents rate the program as Good / Excellent. There do not appear to be any differences by program type, Step Level or receipt of government subsidy.

2. Staff Survey Results

As mentioned earlier, the response rate was 49% and that total of respondents (N = 424) represents 91% (n=234) of all programs contacted for the survey. All potential respondents in the population were contacted and at least one follow up contact was made in order to increase response rates. The general characteristics of the respondents are as follows:

- 96% of the respondents are female.
- 96% of the respondents are Caucasian.
- Education Levels:
    - 23% have some high school or have earned a high school diploma;
    - 19% report "some" Early Care and Education coursework past high school;
    - 4% report one year of Early Care and Education coursework;
    - 25% report an Associate Degree;
    - 21% report a Bachelor Degree; and,
    - 8% report a Master's Degree or higher.
- These respondents report an average (mean) of 11 years (SD=10.08) of working in Early Care and Education with a median of 8 years.
- Respondents report an average (mean) of 7 years (SD=7.40) with current provider/setting with a median of 4 years.

Of these respondents, 20% report working in a Family Child Care Home, 80% report working in some type of center-based setting. The following table presents the setting type and Step Level of the programs for these respondents.

Table 23 – Staff Survey Respondents and Program Type by Step Level (N= 354)

	Step One	Step Two	Step Three	Step Four	Totals
FCCH	17% (n=12)	32% (n=22)	29% (n=20)	22% (n=15)	n = 69
CBC	37% (n=106)	27% (n=72)	23% (n=62)	17% (n=45)	n=285

A full set of descriptive results from the staff / provider survey is available in the Appendix. The following section provides a select set of results based on responses to individual questions and responses to specific scales that were incorporated in the questionnaire.

Respondents were asked how comfortable they felt in working with children and families who have various types of challenges. The top three categories that all respondents felt least comfortable working with were; (1) 90% report not comfortable working with children who have mental retardation, (2) 90% report not comfortable working with children with visual or hearing impairments, and (3) 86% report not comfortable working with children who have autism. There did not appear to be any differences when considering program type and Step Level on these categories of discomfort.

One of the scales that is incorporated in the questionnaire is the Job Stress Inventory (Curbow, Spratt, Ungaretti, et al., 2000) that was adapted and is in use in the Educare child care evaluation project. This and the other scale that follows are in use through permission of the researchers at the Bounce Network, University of North Carolina. The Job Stress Inventory provides an overall score and has three subscales; Job Demands (stressful situations and demands associated with providing early care and education), Job Resources (things associated with providing early care and education that may help contribute to a teacher's job satisfaction or positive feelings about her or his own work) and Job Control (how much control the teacher/provider feels she or he has over things that occur at or around work). Respondents are asked to rate a series of statements on a 1 to 5 scale, Never to Most of the Time. To analyze the effects of Step Level, program type and Step Level by program type on levels of these three subscales, a two way (3x3) ANOVA was utilized. Prior to the two way ANOVA analysis, data was screened to ensure that the two-way ANOVA assumptions were met. The Job Control variable was fine for analysis. For the Job Demands subscale and the Job Resources subscale data transformation was done in order to ensure that these dependent variables were normally distributed. Three outlier cases were removed from the Job Demands data set and the Job Resources variable was negatively skewed so it was transformed through reflecting the shape of the variable into positive skewness, and then a square root was computed for the reflected Job Resources scores. These new variables are used in the following analyses.

For the Job Demands subscale, the top three items that most respondents selected as happening "Often or Most of the Time" were; (1) 33% of all respondents report concerns with parents who bring in children who are sick, (2) 20% of all respondents report concerns with feeling that all of the children need attention at the same time, and (3) 17% of respondents felt demands due to parents not letting staff/provider know where they are during the day.

A two way (3x3) ANOVA was utilized to examine the effects of Step Level, program type (family child care home or center), and Step Level by program type on levels of Job Demands among a sample of 345 providers / teachers included in the QRIS study. Tables 24 and 25 present the estimated marginal mean scores of the Job Demands subscale by Step Level and then Step Level and program type. Comparing by just type of setting, as reported by the respondent, those working in family child care home settings have an estimated marginal mean of 22.79 (SE=1.02) and those working in center-based settings have an estimated marginal mean of 26.60 (SE=.494). Job Demands scores at the setting type level do appear to be significantly different with center-based staff reporting higher levels of Job Demands (p=.001).

Table 24 – Mean Job Demands Scores and Step Level (N= 345)

	Step One (n=118)	Step Two (n=92)	Step Three (n=79)	Step Four (n=59)
Job Demands Subscale	25. 52 (SE=1.12)	25.21 (SE=.930)	23.40 (SE=1.01)	24.19 (SE=1.23)

Table 25 – Mean Job Demands Scores by Step Level and Program Type (N= 345)

	Step One	Step Two	Step Three	Step Four
FCCH	23.83 (SE=2.13) (n=12)	25.30 (SE=1.78) (n=20)	19.82 (SE=1.93) (n=17)	22.21 (SE=2.13) (n=14)
CBC	27.54 (SE=.773) (n=104)	25.11 (SE=.938) (n=72)	27.60 (SE=1.01) (n=61)	26.16 (SE=1.19) (n=45)

Results of the two way ANOVA do not show an overall significant difference in teacher / provider levels of Job Demands based on their program Step Level (F=.884, df=3, p=.450, eta squared = .008). Overall, Step Level only accounted for .8% of the variance in Job Demands, indicating a very weak relationship between the variables. Results of the two way ANOVA do show an overall significant difference in the levels of Job Demands among providers/teachers based on the type of setting they work in (F=11.53, df=1, p=.001, eta squared = .033). Overall, program type accounted for just 3.3% of the variance in Job Demands, a weak relationship between the variables. Finally, interaction effects between Step Level and type of program on levels of Job Demands did not show a significant difference at the .05 level and would at the .10 level (F=2.41, df=3, p=.067, eta squared = .021). Overall, this interaction accounted for just 2.1% of the variance in Job Demands, a weak relationship. Table 26 below presents a summary of the analysis.

Table 26 – Job Demands Subscale Two Way ANOVA

	SS	df	MS	F	p
Step Level	143.629	3	47.876	.884	.450
Type of Setting	624.738	1	624.738	11.531	.001
Interaction	391.052	3	130.351	2.406	.067
Error	18258.411	337	54.179		
Total	19424.388	344			

For the Job Control subscale, how much control the teacher/provider feels she or he has over things that occur at or around work, the same approach to analysis was conducted as for the Job Demands subscale. The top three items that most respondents selected happening "Much or Very Much" were; (1) 52% selected feeling like they had control over the availability of supplies that were needed, (2) 44% reported feeling like they had control over the number of children they had to care for, and (3) 41% felt they had control over getting parents to work with them on behavior problems. Least amount of control was identified in the areas of "Getting parents to be consistent on how to deal with a child", (32%) and "When the parents pick up their children" (32%).

A two way (3x3) ANOVA was utilized to examine the effects of Step Level, program type (family child care home or center), and Step Level by program type on levels of Job Control among a sample of 347 providers / teachers included in the QRIS study. Tables 27 and 28 present the estimated marginal mean scores of the Job Control subscale by Step Level and then Step Level and program type. Comparing by just type of setting, as reported by the respondent, those working in family child care home settings have an estimated marginal mean of 20.22 (SE=.529) and those working in center-based settings have an estimated marginal mean of 15.06 (SE=.254). Job Control scores at the setting type level do appear to be significantly different with family child care home providers reporting higher levels of Job Control (p=.000).

Table 27 – Mean Job Control Scores and Step Level (N= 343)

	Step One (n=115)	Step Two (n=91)	Step Three (n=78)	Step Four (n=59)
Job Demands Subscale	16.68 (SE=.644)	18.16 (SE=514)	18.30 (SE=.557)	17.43 (SE=622)

Table 28 - Mean Job Control Scores by Step Level and Program Type (N= 343)

	Step One	Step Two	Step Three	Step Four
FCCH (n=62)	18.46 (SE=1.23)	20.30 (SE=.909)	20.71 (SE=.986)	21.43 (SE=1.09)
CBC (n=281)	14.90 (SE=.399)	16.01 (SE=.482)	15.90 (SE=.520)	13.42 (SE=.606)

Results of the two way ANOVA do not show an overall significant difference in teacher / provider levels of Job Control based on their program Step Level (F=1.549, df=3, p=.202, eta squared = .014). Overall, Step Level only accounted for 1.4% of the variance in Job Control, indicating a very weak relationship between the variables. Results of the two way ANOVA do show an overall significant difference in the levels of Job Control among providers/teachers based on the type of setting they work in (F=77.382, df=1, p<.001, eta squared = .188). Overall, program type accounted for 19% of the variance in Job Control, indicating some evidence of a relationship between the variables. Finally, interaction effects between Step Level and type of program on levels of Job Control did not show a significant difference at the .05 level and would at the .10 level (F=2.53 df=3, p=.057, eta squared = .022). Overall, this interaction accounted for just 2.2% of the variance in Job Demands, a weak relationship. Table 29 below presents a summary of this analysis.

Table 29 – Job Control Subscale Two Way ANOVA

	SS	df	MS	F	p
Step Level	76.762	3	25.587	1.549	.202
Type of Setting	1278.371	1	1278.371	77.382	.000
Interaction	125.557	3	41.852	2.533	.057
Error	5534.297	335	16.520		
Total	7180.630	342			

For the Job Resources subscale, things associated with providing early care and education that may help contribute to a teacher's job satisfaction or positive feelings about her or his own work, the same analytic approach was applied. The top three categories that most respondents reported as "Often / Most of the Time" were; (1) 98% reported that they feel like they are helping the children grow and develop, (2) 92% report that they see that their work is making a difference with a child, and (3) 83% report feeling the satisfaction that they are helping parents. The lowest two items in this category were; 67% feeling respected for the work they do and 54% report getting praise from parents for the work they do.

A two way (3x3) ANOVA was utilized to examine the effects of Step Level, program type (family child care home or center), and Step Level by program type on levels of Job Resources among a sample of 347 providers / teachers included in the QRIS study. Tables 30 and 31 present the estimated marginal mean scores of the Job Resources subscale by Step Level and then Step Level and program type. Note that these scores are transformed results and are interpreted as the higher the score the fewer the resources as perceived by the respondent. Comparing by just type of setting, as reported by the respondent, those working in family child care home settings have an estimated marginal mean of 1.39 (SE=.111) and those working in center-based settings have an estimated marginal mean of 1.82 (SE=.054). Job Resources scores at the setting type level do appear to be significantly different with family child care providers reporting higher levels of Job Resources than center-based staff (p=.001).

Table 30 – Mean Job Resources Scores and Step Level (N= 344)

	Step One (n=116)	Step Two (n=91)	Step Three (n=78)	Step Four (n=59)
Job Resources Subscale	1.70 (SE=.131)	1.79 (SE=.109)	1.53 (SE=118)	1.41 (SE=.132)

Table 31 – Mean Job Resources Scores by Step Level and Program Type (N= 344)

	Step One	Step Two	Step Three	Step Four
FCCH (n=63)	1.51 (SE=.249)	1.68 (SE=.193)	1.24 (SE=.209)	1.14 (SE=.230)
CBC (n=281)	1.89 (SE=.085)	1.90 (SE=.102)	1.83 (SE=.110)	1.69 (SE=.128)

Results of the two way ANOVA do not show an overall significant difference in teacher / provider levels of Job Resources based on their program Step Level (F=1.94, df=3, p=.122, eta squared = .017). Overall, Step Level only accounted for 1.7% of the variance in Job Resources,

indicating a very weak relationship between the variables. Results of the two way ANOVA do show an overall significant difference in the levels of Job Resources among providers/teachers based on the type of setting they work in (F=12.25, df=1, p=.001, eta squared = .035). Overall, program type accounted for 3.5% of the variance in Job Resources, a weak relationship between the variables. Finally, interaction effects between Step Level and type of program on levels of Job Resources did not show a significant difference (F=.557 df=3, p=.644, eta squared = .005). Overall, this interaction accounted for just .5% of the variance in Job Demands, a weak relationship. Table 32 below presents a summary of this analysis.

Table 32 – Job Control Subscale Two Way ANOVA

	SS	df	MS	F	p
Step Level	4.333	3	1.444	1.944	.122
Type of Setting	9.104	1	9.104	12.255	.001
Interaction	1.242	3	.414	.557	.644
Error	249.611	336			
Total	264.034	343			

The other set of subscales in the questionnaire are part of the Parental Modernity Scale (Shaefer & Edgerton, 1985). This is a self report measure that has two subscales within it; (1) progressive democratic beliefs and (2) traditional authoritarian beliefs. There are 8 items measuring progressive beliefs such as " children should be allowed to disagree with their parents if they feel their own ideas are better" and 12 items measuring more traditional beliefs such as "children will not do the right thing unless they are told what to do". The items are measured on a 5 –Likert scale, "Strongly Disagree to Strongly Agree". Higher progressive beliefs scores reflect more modern beliefs about child rearing and education. A higher Traditional beliefs score reflects strict and conservative beliefs about childrearing and education.

For the Progressive Beliefs subscale, the majority of all respondents Agreed with the following statements; (1) 96% believed that children like to teach other children, (2) 94% believed that children have a right to their own point of view and should be allowed to express it, (3) 73% agreed that children learn best by doing things themselves rather than listening to others, and (4) 49% agreed that children should be allowed to disagree with their parents if they feel their own ideas are better.

A two way (3x3) ANOVA was utilized to examine the effects of Step Level, program type (family child care home or center), and Step Level by program type on levels of Progressive Beliefs among a sample of 343 providers / teachers included in the QRIS study. Prior to the two way ANOVA analysis, data were screened and the two-way ANOVA assumptions were met. Tables 33 and 34 present the estimated marginal mean scores of the Progressive Beliefs subscale by Step Level and then Step Level

and program type. Comparing by just type of setting, as reported by the respondent, there did not appear to be any differences between those working in family child care home settings with an estimated marginal mean of 26.12 (SE=.554) and those working in center-based settings mean of 25.076 (SE=.268) (p=.083).

Table 33 – Mean Progressive Beliefs Scores and Step Level (N= 343)

	Step One (n=115)	Step Two (n=91)	Step Three (n=78)	Step Four (n=59)
Progressive Beliefs Subscale	25.98 (SE=.655)	26.51 (SE=.554)	24. 48 (SE=.589)	25.43 (SE=.657)

Table 34 – Mean Progressive Beliefs Scores by Step Level and Program Type (N= 343)

	Step One	Step Two	Step Three	Step Four
FCCH (n=62)	26.33 (SE=1.24)	27.79 (SE=.985)	25.00 (SE=.1.04)	25.36 (SE=1.15)
CBC (n=281)	25.62 (SE=.423)	25.22 (SE=.506)	23.95 (SE=.550)	25.51 (SE=.640)

Results of the two way ANOVA do not show an overall significant difference in teacher / provider levels of Progressive Beliefs based on their program Step Level (F=2.24, df=3, p=.083, eta squared = .020). Overall, Step Level only accounted for 2% of the variance in Progressive Beliefs, indicating a very weak relationship between the variables. Results of the two way ANOVA also do not show an overall significant difference in the levels of Progressive Beliefs among providers/teachers based on the type of setting they work in (F=2.879, df=1, p=.091, eta squared = .009). Overall, program type accounted for .9% of the variance, a very weak relationship between the variables. Finally, interaction effects between Step Level and type of program on levels of Progressive Beliefs did not show a significant difference (F=.914 df=3, p=.435, eta squared = .008). Overall, this interaction accounted for just .8% of the variance, another very weak relationship. Table 35 below presents a summary of the analysis.

Table 35 – Progressive Beliefs Subscale Two Way ANOVA

	SS	df	MS	F	p
Step Level	123.822	3	41.274	2.240	.083
Type of Setting	53.058	1	53.058	2.879	.091
Interaction	50.513	3	16.838	.914	.435
Error	6173.813	335			
Total	6429.773	342			

For the Traditional Beliefs subscale, the majority of all respondents agreed with the following; (1) 59% Agreed that children's learning results mainly from being presented basic information again and again, (2) 57% Agreed that children should be treated the same regardless of differences between them, and (3) 47% Agreed that children should always obey the teacher.

A two way (3x3) ANOVA was utilized to examine the effects of Step Level, program type (family child care home or center), and Step Level by program type on levels of Traditional Beliefs among a sample of 343 providers / teachers included in the QRIS study. Prior to the two way ANOVA analysis, data were screened and the two-way ANOVA assumptions were met. Tables 36 and 37 present the estimated marginal mean scores of the Progressive Beliefs subscale by Step Level and then Step Level and program type. Comparing by just type of setting, as reported by the respondent, there did not appear to be any differences between those working in family child care home settings with an estimated marginal mean of 29.07 (SE=1.086) and those working in center-based settings mean of 27.66 (SE=.525) (p=.244).

Table 36 – Mean Traditional Beliefs Scores and Step Level (N= 343)

	Step One (n=115)	Step Two (n=91)	Step Three (n=78)	Step Four (n=59)
Traditional Beliefs Subscale	30.30 (SE=1.283)	30.54 (SE=1.085)	25.83 (SE=1.154)	26.81 (1.288)

Table 37 – Mean Traditional Beliefs Scores by Step Level and Program Type (N= 343)

	Step One	Step Two	Step Three	Step Four
FCCH (n=62)	31.50 (SE=2.43)	33.73 (SE=1.93)	26.47 (SE=2.04)	24.57 (SE=24.57)
CBC (n=281)	29.10 (SE=.829)	27.33 (SE=.992)	25.18 (SE=1.08)	20.04 (SE=1.25)

Results of the two way ANOVA do show an overall significant difference in teacher / provider levels of Traditional Beliefs based on their program Step Level (F=4.188, df=3, p=.006, eta squared = .036). Overall, Step Level only accounted for 3.6% of the variance, indicating a very weak relationship between the variables. Results of the two way ANOVA did not show an overall significant difference in the levels of Traditional Beliefs among providers/teachers based on the type of setting they work in (F=1.36, df=1, p=.244, eta squared = .004). Overall, program type accounted for .4% of the variance, a very weak relationship between the variables. Finally, interaction effects between Step Level and type of program on levels of Progressive Beliefs did show a significant difference (F=3.512 df=3, p=.016, eta squared = .030). Overall, this interaction accounted for just 3% of the variance, another weak relationship. Multiple comparisons (Bonferri) indicate that there are differences in the level of Traditional Beliefs between respondents in programs at the Step One and Step Three level (p=.011). Differences were not noted at other Step Levels. Apparently teachers/ providers at the higher tier levels have less Traditional Beliefs about childrearing and education than those working at settings at the two lower tier levels. Table 38 below presents a summary of the analysis.

Table 38 – Progressive Beliefs Subscale Two Way ANOVA

	SS	df	MS	F	p
Step Level	889.696	3	296.565	4.188	.006
Type of Setting	96.293	1	96.293	1.360	.244
Interaction	746.056	3	248.685	3.512	.016
Error	23724.305	335	70.819		
Total	25390.157	342			

Respondents were asked about their perceptions of their work as a career. Over 90% of the respondents agreed with the following; (1) My position is work I feel I am able to do well, (2) Work I put a lot of effort into, (3) Work I feel committed to, and (4) a Job in which I have the opportunity to learn and grow. The majority (85%) of respondents view the work as their job or profession and 40% see this

current job as a stepping stone to a related career or profession. There were no significant differences noted between work settings or Step Levels on these career related variables.

Respondents were also asked to consider their current workplace climate and most respondents stated they "Mildly – Strongly Disagreed" with the following statements; (1) 75% did not think they had to follow rules in the program that conflicted with his/her best professional judgment, (2) 60% disagreed that routine duties and paperwork interfered with their job, (3) 46% disagreed that they were satisfied with their salary, (4) 18% disagreed that they had the necessary materials available; and (5) 16% disagreed that they had enough opportunity to influence decisions that affect their work. There were no significant differences noted between work settings or Step Levels on these variables.

Respondents were asked about what are the most important services that a high quality program should provide to children and families. The top three types of services identified were; (1) Maintaining small class sizes and high staff/child ratios, (2) Having a strong focus on social-emotional development for children, and (3) evaluating and assessing child progress. There were differences between family child care home providers and center-based providers concerning evaluating and assessing child progress with center-based staff believing that was more important than family child care home providers (p=.017). The same kind of result was found with Step Level differences in that providers / teachers working in Step One programs were less likely than those working in the higher tier programs to feel that child assessment was important (p=.036).

IV. FINDINGS AND IMPLICATIONS FOR PROGRAM AND POLICY

A. Child Care Program Enrollment to QRIS

Overall enrollment in the Quality for ME system was not significantly different from predicted aside from results in Washington County. Although it is reassuring that in most parts of the state the overall number of programs enrolled is consistent with expectations, as a percentage of total eligible programs, family child care homes are enrolled at lower than predicted rates. Additionally, family child care homes are disproportionately enrolled at the lowest Step (One) of the Quality for ME system. These findings point to a need to engage family child care homes in enrollment with Quality for ME and to consider carefully the barriers to their participation at higher Step Levels. An area of interest for the state might be a more qualitative follow up study with family child care providers (survey, focus group interview) to determine the perceived and real barriers that exist for family child care providers. Given the rural nature of the state, as well as size of the family child care delivery system in Maine, it is important to ensure that access to Quality for ME, as well as opportunities to advance along the Steps of the system are equitable across the settings that families choose when placing their children in care outside of the home.

B. Quality Rating and Improvement System Standards to be Met

It seems clear that for programs in Maine, regardless of setting type, achieving national accreditation and implementing an authentic assessment system that includes regular observation and documentation are common challenges. This finding is consistent with research literature defining the quality of child care nationally which indicates that most care is on average mediocre (Pianta, 2006). Pianta (2006) found that, "despite variation from study to study, the quality of early education and care settings is, on average, mediocre regarding the kinds of interaction and stimulation known to produce developmental gains for children." Thus it is not unusual for Maine's programs to be struggling with the higher Step Levels of Quality for ME which require teachers and programs to be self-reflective, to intentionally plan for children's learning and development from authentic assessment data, and to provide the level of quality necessary to achieve national accreditation. These findings do, however point to the continued need for investment in programs that support Maine child care providers, across settings, to understand the type of self-reflection involved in accreditation, as well as to define authentic assessment in ways that are simple and easy to implement for program staff in their daily work. Providing additional training and technical assistance around the topic of authentic assessment and its implementation in Quality for ME programs is critical to ensuring that programs are able to meet this standard in ways that are both developmentally appropriate for children and meaningful and pragmatic for programs.

C. Issues of Program Advancement in the QRIS

This portion of the study provides at least three areas of interest that could be further investigated in order to better understand barriers that may exist to increasing the number of programs advancing to higher tiers or steps in the system. First, the original assumption made by the system designers that within two years of enrollment a program, regardless of Step Level, should be able to advance in the system is not supported by these findings. It appears to be only accurate for the Step Three to Step Four interval in the system. Table 39 below presents the survival estimates for all program types by Step Level intervals. The second column presents survival estimates for the interval from Step One to Step Two. At the end of the 12-23 month period, 89% of family child homes and 76% of center-based programs are still at Step One. Column three presents estimates for the Step Two to three interval and at the end of the 12-23 month period 66% of family child care homes, 73% of center-based programs and 56% of Head Start programs were still at Step Two. Estimates presented in the last column for Step Three to Four indicate that 76% of family child care homes, 46% of centers and 40% of Head Start programs are still at Step Three.

Table 39 – Description of Static Enrollment by Survival Estimates
*Note: FCCH = Family Child Care Homes, CBC = Center-based Care and HS = Head Start Settings

	Step One to Two: Survival Estimate - Cumulative Proportion Surviving at End of Interval	Step Two to Three: Survival Estimate - Cumulative Proportion Surviving at End of Interval	Step Three to Four: Survival Estimate - Cumulative Proportion Surviving at End of Interval
FCCH 0-11 Months	.93	.77	.87
CBC 0-11 Months	.91	.89	.69
HS 0-11 Months		.56	.47
FCCH 12-23 Months	.89	.66	.76
CBC 12-23 Months	.76	.73	.46
HS 12-23 Months		.56	.40
FCCH 24-35 Months	.85	.66	.65
CBC 24-35 Months	.72	.61	.24
HS 24-35 Months		.56	.28
FCCH 36+ Months	.85	.44	.65
CBC 36+ Months	.72	.41	.24

The second area of interest is that it appears that for events occurring at the Step One to Two and Three to Four levels, program type is a significant factor. Meaning that at both of these intervals in the system, it appears that family child care homes are less likely to advance when compared to center-based and or Head Start programs. For some reason at the Step Two to Step Three interval program type is not found to be a significant covariate. Across all intervals, regional location was not found to be significant. One explanation could be that some other factor(s) not measured may better explain event occurrence. As mentioned earlier, this threat to model specification is certainly a limitation to this study. However, over the period of implementation of the quality rating and improvement system in this state, there have always been disproportionately fewer family child care programs at the two higher tier levels when compared to center-based settings. It may be that the program quality standards and or the kinds of supports necessary to reach those higher tiers are somehow creating barriers for family child homes to have a similar rate of movement. In any case, this apparent difference in Step Level progress is a place for further investigation as it raises equity concerns and ultimately may influence the access to quality care for some families dependent upon the kinds of child care programs they can access.

The third area of interest for this portion of the study is how to interpret this kind of information given the amount of enrollment into a quality rating and improvement system. For this state, approximately 47% of all licensed and eligible programs are now enrolled in the system. As mentioned earlier, some programs are mandated to participate and for the remaining programs it is voluntary. The question is, are there enough programs enrolled so that one can use information from this type of study to plan at a system wide level? While some states do mandate enrollment for all licensed

programs into a child care quality rating and improvement system, this type of requirement is not part of the new federal policy initiative. Systems that do not mandate enrollment may be enrolling those programs that are most motivated. Without an incentive or penalty, programs may stay static at a Step Level and in fact be making improvements to quality that are not reflected in the program quality standards selected by the state agency. There are numerous gaps in knowledge such as understanding the motivation on the part of program staff and or the strength of the validity of the program quality standards that make it difficult to understand program movement in this type of system.

D. Implications of the Validation of Program Quality Standards by Step Level

This study found some evidence for differences at the Step Levels through a factorial analysis that considered Step Level, program type and the different Environmental Rating Scale in use at the classroom or program site level. While the relationship between the Step Level and the global ERS quality mean score was not strong, it was present and each factor appeared to indicate a trend towards higher ERS mean scores based on higher Step Levels. Family child care homes appeared to score somewhat lower on the ERS when compared to pre-school and or school age programs. However, family child care homes appeared to have the most distinct positive trend in terms of higher ERS mean scores in relationship to higher Step Levels.

Of critical significance is that these ERS mean scores are all below what is considered a level of "Good" program quality based on the ERS scale. While this finding is not unique to this study, it is certainly a reason to continue a concerted effort to improve program quality at each Step Level. Particularly for programs that are serving children with the most challenges in terms of their development. There is no evidence from this study that would indicate that overall program quality is at a level whereby additional supports for providers would not be needed.

The limitation to this type of validation study is that it does not identify which quality standards are of the most influence in terms of driving program quality. While there does appear to be some reason to believe that these combinations of program quality indicators are resulting in different levels of global quality, it is not possible to say with any kind of certainty which quality standards matter most and for what type of program or more importantly, for which types of children.

The significant benefit to this type of study is that it does provide some reason to feel confident that these program quality standards are valid as one way to understand the output of the rating process. The way in which the ERS data was collected at the indicator level for all items also provides valuable information to plan for efforts at program improvement. An important next step from this study will be to design concerted program improvement services for those programs most in need of support based on their current Step Level and or program type. Technical assistance providers need to be able to effectively utilize information from the ERS reports with child care program staff to improve aspects of global quality. This information from on-site observation, along with the knowledge of the QRIS quality standards that need to be met, can support technical assistance efforts to be targeted and based on empirical evidence.

Finally, the validation study needs to continue as the QRIS quality standards are revised over time. Results from this type of study can be used for both monitoring the implementation of the QRIS and for planning program improvement services for local providers. These results provide some confidence that the current program quality standards are working as intended. Child care programs at higher Step Levels appear different in global quality, somewhat higher in quality, than those similar programs at lower Step Levels. This type of evidence provides a good foundation for considerations given to revising program quality standards in the future.

E. Parent and Staff Perceptions of Program Quality

Parent and staff perceptions of quality, based upon the surveys used in this study offer descriptive data about the implementation of the standards of Maine's QRIS as well as information about what families and providers/teachers see as valuable in high quality child care programming. These data also indicate where providers/teachers feel unsure or challenged in providing high quality care and education.

When considering the types of supports families receive, significant differences were found between center-based and family child care settings. Notably, at Step One, 84% of parents enrolling children in a family child care home received a parent handbook compared to 92% of parents utilizing a center-based setting. At Step One of QRIS, all programs must meet Maine Child Care Licensing regulations which are different based upon setting. Center-based regulations require programs to describe, in writing, program activities, schedules, materials and activities, in addition to admissions criteria. In family child care homes, regulations require admissions criteria to be detailed in writing, but for other types of program information, there is no requirement for this to be written for parents. This difference continues at Step Three of Maine's QRIS, indicating that even as family child care providers move up the Step Levels of QRIS, the use of a parent handbook is different across these settings. It is not surprising that programs not required by licensing to have detailed written parent policies are less likely to have parents who report that they receive a written handbook outlining them. However, when one looks at data from the staff questionnaires, issues related to working and communicating with parents are regularly cited as contributing to job demands and limited control. For instance, least amount of control was identified by staff in the areas of "Getting parents to be consistent on how to deal with a child", (32%) and "When the parents pick up their children" (32%). Additionally, among the most frequently occurring barriers for programs trying to move up the Step Levels of QRIS were the "use of a parent advisory group" and the "use of an annual parent survey". These data indicate that providers/teachers need support in working with families across the home-school continuum. Introducing a parent handbook, upon enrollment, and referring families to this throughout their enrollment period, can be a helpful first step in mitigating issues between families and child care settings. Explaining the handbook to families as they make enrollment decisions also allows families to place their child in settings that meet their needs as well as with providers who have similar child care beliefs and values to those of their family. These documents combined with conversations provide a foundation upon which providers can build when addressing challenging issues such as consistent expectations of children across home and school settings. Written handbooks also help address more

straightforward issues like communicating child pick-up and departure policies to families. Establishing policies and expectations in a written parent handbook is often a first step when working with families and should be consistently required within the licensing regulation across settings. Requiring written program details for center-based settings has supported programs in meeting the parent handbook standard of Maine's QRIS and should be considered as a simple mechanism to support family child care homes in doing the same.

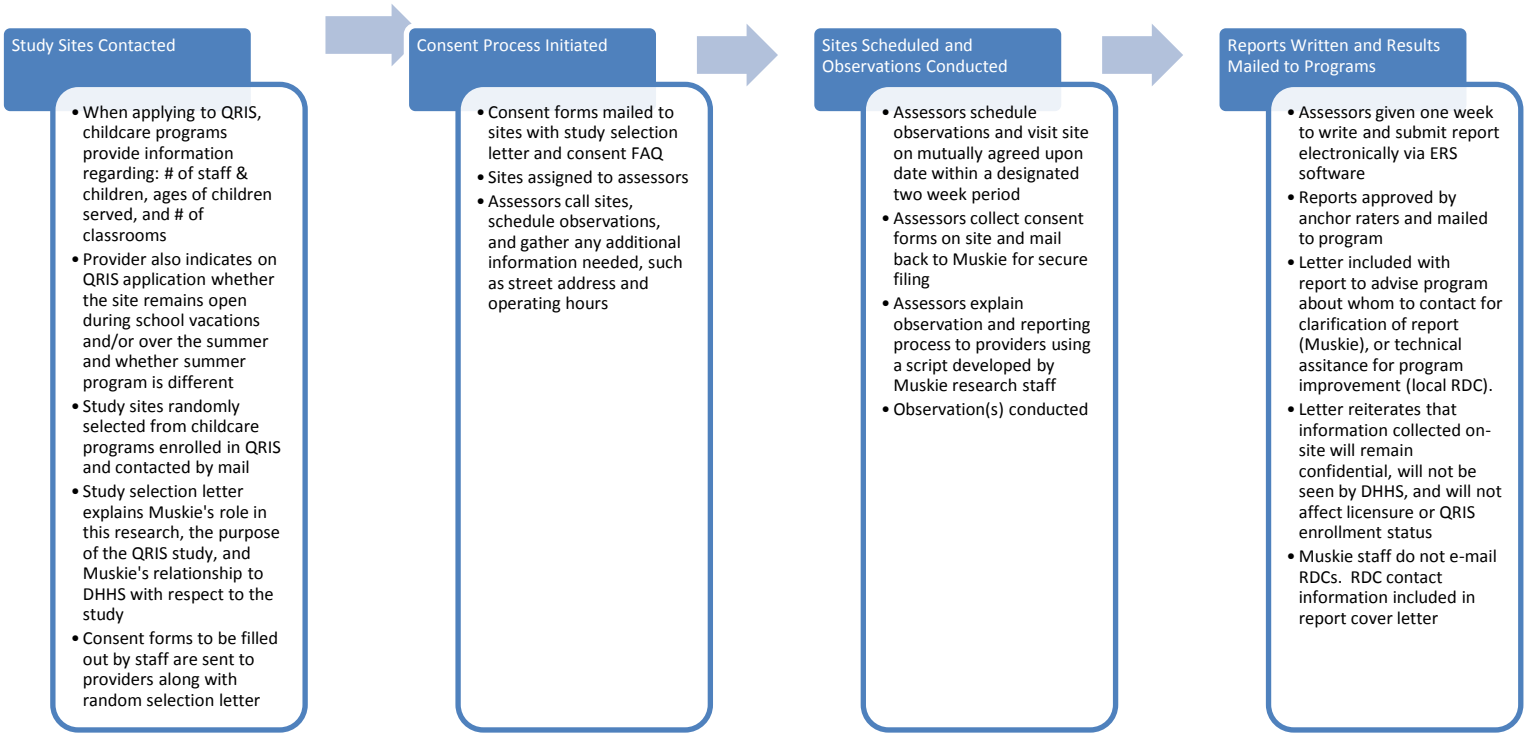
Another area of significant difference across settings, at all Step Levels of QRIS, is in the use of an annual parent survey and the use of written daily communication with parents. Center-based programs are significantly more likely to use a parent survey and to communicate in writing, daily, with families. This area of difference warrants further analysis. How do family child care providers communicate with parents? Are more informal mechanisms used regularly? If so, what are they and is there a way to measure such communication? It seems clear that the significant differences across settings in terms of both offering information to parents, as well as gathering input from families is critical as we consider ways to support programs in their work with families and children, however it is important to understand how such communication may differ across settings. Further analysis of parent communication mechanisms in the less formal family child care home setting would be helpful in designing both accurate measures and effective supports for providers in these settings.

Finally, it is important to emphasize that the differences identified in this evaluation were mostly due to program type differences instead of differences between Step Level. This is an important consideration in developing and providing supports such as training and technical assistance to programs in Maine's QRIS. These differences between family child care and center-based programs indicate that supports designed to help programs move up the QRIS Steps need to be specific and responsive to different program settings.

F. Recommendations to Improve Data Collection and Reporting Processes

Over the course of this three year study, Muskie Staff encountered several challenges in trying to reach the sample goal of 320 childcare programs. Chief among these challenges were: study withdrawals (as previously noted); a lengthy consent process; lack of predictability in the number of classrooms needing to be observed at a particular childcare site; summer closure of public school-based and other childcare programs (some providers that did remain open during the summer also reported using a curriculum and schedule different from that during the rest of the year, thus making it difficult to observe the programs on a "typical day," as advised by the authors of the scale), which delayed program observations sometimes for as long as three months, and finally, the lack of a sufficient number of family childcare providers at enrolled in the QRIS at Step Four. Recommendations for changes to the data collection process for classroom / program observations are presented in Figure 18 below.

Figure 19- Recommendations for Changes Data Collection Process in Future



Another set of recommendations related to the on-site observation process will be to consider use of the CLASS (Pianta et al, 2008) measure and to identify a different observational measure for school age programs. The CLASS measure is in use in many other QRIS evaluations across the country given its ability to more distinctly measure inter-actions. In addition, the kind of reporting from this measure appears to be very useful for educators in terms of identifying opportunities for changes in their work with children. The recommendation is to pilot the use of CLASS in order to identify how best to report results from the ERS and CLASS for use in program improvement.

The use of the SACERS as a school age program measure in this study was useful as the broad sub-scales are similar to the other ERSs, however the psychometric properties of this measure are not at all equivalent to the other ERSs. The recommendation is to identify a different observational measure for school age programs and pilot that measure in the next validation study period.

The parent and staff survey processes need to be revised based on experiences over the past three years. A random sampling approach should be instituted with more concerted follow up with both parents and providers targeted to those classrooms and program sites that also have an on-site observation. A sampling approach can limit the scope of the data collection process and allow University research staff to more effectively follow up with potential non-respondents at each program

site. In addition, the questionnaires for both groups should be revised to take into account advances to this type of research as described in current literature.

G. Conclusion

The findings and implications for program and policy section of this report outlines the salient issues that arose from the evaluation of Quality for ME, Maine's quality rating and improvement system. However, there is still much to be gleaned from data collected in this evaluation study. Next steps for this research team include summarizing and highlighting these in an executive summary for Maine's leadership so that continued emphasis on both quality improvement and program monitoring mechanisms can be informed and strengthened by this study. Additionally, some of the analysis pointed to interesting differences between settings, raising new questions to be explored in follow-up qualitative studies.

As most who raise livestock know, you cannot make an animal gain weight or keep it healthy just by weighing it. The same is true in terms of monitoring systems put in place in response to new policy, such as those studied in this evaluation. The monitoring system starts to describe certain components of a complex system, but it does not, in and of itself, improve the system. It is also true that by measuring something we tend to treasure it more, and with new information more attention can be paid to how child care programs are improving. Program administrators know that administrative data has significant limitations, and program monitoring by itself is not enough to improve program quality. The hope is that by conducting descriptive and validation type studies, different kinds of questions can be asked in relation to the challenges programs face in improving quality and moving up the steps of the QRIS. Ultimately the answers to these questions can result in new ways to improve child care program quality.

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