

Georgia Child Care Licensing Study: Validating the Core Rule Differential Monitoring System

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ABSTRACT

The purpose of this study was to validate Georgia's process for determining if a state-regulated child care facility is compliant with basic state health and safety requirements. The process was developed by staff at Bright from the Start: Georgia Department of Early Care and Learning (DECAL). Currently Georgia utilizes a "Core Rule" risk assessment approach in which the health and safety rules deemed most crucial to ensure children's health and safety are used to compute a program's compliance status. This validation study utilized a unique analytical model that compared licensing data with previous key indicator (*for readers not familiar with this term, please see the definitions on page 4 of the report*) research and ascertained if the Core Rules accurately indicated a program's overall compliance with the total population of licensing rules. Additional statistical analyses examined if the mathematical formula used to compute compliance was an appropriate configuration of the data that discerned between those programs that adequately met basic health and safety rules (compliant) and those that did not (non-compliant). Also licensing data were compared to a representative sample of quality data collected as part of a different study to examine the correlation between compliance and quality. A Differential Monitoring Logic Model/Algorithm (DMLMA©) (Fiene, 2012) and a previous validation framework (Zellman & Fiene, 2012) were used in the research. Child care centers (CCC) and family child care (FCC) homes were assessed. The analysis demonstrated that the Core Rules did serve as key indicators, though this list should be reexamined. The second analysis concluded that the computation could be simplified. Finally, the expected correlation between compliance and quality was found but only in state-funded Pre-K classrooms; it was not found in preschool classrooms and could not be validated. Family child care could not be validated either. As a result of the study, recommendations were made to strengthen Georgia's child care licensing system.

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INTRODUCTION

Background of Georgia's Compliance Determination System

Similar to other states, Georgia has a licensing and monitoring system that oversees a diverse population of early care and learning programs across the state. The licensing and monitoring system of early care and learning programs is charged to Bright from the Start: Georgia Department of Early Care and Learning (DECAL), a state early education department that also oversees and administers Georgia's Pre-K Program, Child Care and Development Block Grant, the Child and Adult Care Food Program, and the Summer Food Service Program. In 2012, DECAL's licensing and monitoring system regulated approximately 6,300 early care and learning programs. The crux of this regulation is determining if the programs meet Georgia's health and safety rules. Programs that meet these rules are determined to be compliant.

In the mid 2000's, Georgia began experimenting with a process that determined whether or not a program was designated as compliant with the state's health and safety regulations by focusing on key Core Rules. These are health and safety rules deemed crucial to minimizing risk related to children's health and safety. Seventy-four rules out of the 456 that programs must follow were classified as Core Rules¹. Core Rules are cited by severity (low, medium, high, extreme). It is important to note that this entails a risk assessment theoretical approach rather than a Key Indicator statistical approach. This means that the Core Rules were determined by content analysis rather than by a statistical procedure.

Though this system has undergone some slight revisions, this basic methodology is still in place:

1. All programs receive at least one full licensing study and one monitoring visit. At the licensing study all applicable rules are examined. At the monitoring visit, only Core Rules (or any rule that was not met at the licensing study) are examined.
2. If additional visits are conducted, the Core Rules are examined again at that time.
3. At the end of the fiscal year (June 30), each program receives a compliance determination. This determination is based on all visits (licensing study, monitoring visit, and other reviews). A standardized worksheet, Annual Compliance Determination Worksheet (ACDW), is used to make the computation that determines the designation.
4. The compliance status remains until the next determination one year later. Programs do not have an opportunity to contest the compliance determination, though programs have numerous opportunities to contest any citation.
5. At the conclusion of Fiscal Year 2012, approximately 91% of the programs were classified as compliant. A program's eligibility for certain services, acceptance into Quality Rated and Georgia's Pre-K Program, is impacted by the program's compliance determination.

Background of this Study

Since the compliance determination system has been used for several years, key policymakers at DECAL requested an external review to validate if the system was operating as intended. Are the Core Rules a sufficient subsample to measure a program's overall regulation with the state's health and safety regulations? Furthermore, does the compliance determination formula appropriately differentiate compliant programs from non-compliant programs? In other words, is the computation a viable way to make this designation? And finally, does compliance determination serve as a sufficient indicator for other aspects of quality not addressed in Georgia's health and safety rules?

The purpose of this study was to validate the aforementioned compliance determination process. This validation process utilized a unique analytical model that compared licensing data with previous key indicator research and ascertained if the Core Rules are an indication of a program's overall compliance with the total population of licensing rules. Second, additional statistical analyses examined if the mathematical formula used to compute compliance was an appropriate configuration of the data that differentiated between those programs that adequately met basic health and safety rules (compliant) and those that did not (non-compliant). Finally, licensing data were

¹ The number of Core Rules was expanded in 2012 to include increased enforcement and sanctions regarding transportation. The new Core Rules were not part of this analysis.

compared to a representative sample of quality data collected as part of a different study to examine the correlation between compliance and quality (see a further explanation of the sample in the Limitations Section of this report).

Specifically, the study addressed the following research questions:

1. **Do the Core Rules for child care centers (CCC) and family child care (FCC) homes serve as overall Key Indicators of compliance?**
2. **Does the Annual Compliance Determination Worksheet (ACDW) appropriately designate programs as compliant or non-compliant related to health and safety?**
3. **Are the Core Rules for CCCs and FCC Homes related to program quality?**

The following definitions are used in the study:

Core Rules = the rules determined to be of greatest importance and place children at greatest risk if not complied with. This approach is defined in the licensing literature as a risk assessment approach. Core Rules cover 12 regulatory areas and 74 specific rules. The Core Rules were the focal point of this validation study and are addressed in the first approach to system validation, validating Standards, and the first research question addressed by this study. Specific validation approaches are described below.

ACDW = Annual Compliance Determination Worksheet, the compliance decision-making system based on the Core Rules that can be used to determine the number of visits made to programs. The ACDW was the secondary focal point of this validation study and is addressed in the second approach to system validation, validating Measures, and the second research question.

Key Indicators = a differential monitoring approach that uses only rules that statistically predict overall compliance with all the rules. In other words, if a program is 100% in compliance with the Key Indicators, the program will also be in substantial to full compliance with all rules. The reverse is also true in that if a program is not 100% in compliance with the Key Indicators, the program will also have other areas of non-compliance with all the rules. In this study, eight Key Indicators rules were identified for CCC and nine Key Indicators rules for FCC (See Tables 9-12 and Figure 2 on pages 15-16 for the specific indicators and additional detail about the methodology). These are in addition to the Core Rules.

Rule Violations or Citations = occurs when a program does not meet a specific rule and is cited as being out of compliance with that rule. These individual rule violations/citations are summed to come up with total violation/citation scores on the Core Rules and on the Licensing Studies.

Differential Monitoring = a relatively new approach to determining the number of licensing visits made to programs and to what rules are reviewed during these visits. Two measurement tools drive differential monitoring: one is a Weighted Risk Assessment, and the other is a Key Indicator checklist. Weighted Risk Assessments determine how often a program will be visited while Key Indicator checklists determine what rules will be reviewed in the program. Differential monitoring is a powerful approach when Risk Assessment is combined with Key Indicators because a program is reviewed by the most critical rules and the most predictive rules. See Figure 1 which presents a Logic Model & Algorithm for Differential Monitoring (*DMLMA*©) (Fiene, 2012).

Licensing Study = a comprehensive review of a program where all child care rules are reviewed.

Monitoring Visit = an abbreviated form of a visit and review in which only a select group (Core Rules) of child care rules are reviewed.

Program Quality = for the purposes of this study, quality was measured in child care centers by the *Early Childhood Environment Rating Scale-Revised (ECERS-R)*, *Infant Toddler Environment Rating Scale-Revised (ITERS-R)* and in family child care homes by the *Family Child Care Environment Rating Scale-Revised (FCCERS-R)*. The program quality measures were used as part of the third approach to system validation, Outputs, and the third research question.

Scoring for Licensing Variables/Data Collection Protocols:

Licensing Study = the total number of rule violations for a specific facility.

Core Rules = the total number of core rule violations.

ACDW/Compliance Designation = the annual compliance determination taken from the Annual Compliance Determination Worksheet. Compliant [C] was coded as “1” in the data base; Non-Compliant [NC] was coded as “0” in the data base.

Key Indicators = these were generated by a statistical methodology based upon the ability of the specific rule to predict full compliance with all the rules. Data from the Licensing Studies were used to make this determination of key indicator rule status.

METHODOLOGY AND ANALYTICAL FRAMEWORK

Licensing data over a four-year period (2008-2012) and matching program quality data from a two-year period (2007-2008) were used in this study. Specifically, data from 104 child care centers and 147 family child care homes were analyzed. Data from licensing studies (all rules) and monitoring visits (selected rules) were utilized. Program quality data were provided by researchers from the FPG Child Development Institute at the University of North Carolina at Chapel Hill (FPG), and the FPG research team matched these data points with the licensing data provided by DECAL (See the following website for the specific reports - <http://dec.al.ga.gov/BftS/ResearchStudyOfQuality.aspx>). All the data were analyzed by the Research Institute for Key Indicators.

Two models were used to frame the analysis: a Validation Framework that uses four approaches (Zellman & Fiene, 2012) to validating quality rating and improvement systems (QRIS) being applied to licensing systems; and a *Differential Monitoring Logic Model and Algorithm (DMLMA©)*(Fiene, 2012) were employed to answer the three research questions for this Validation Study. The validation approaches are described below; the *DMLMA©* is described at the beginning of the Findings Section of this report.

The first validation approach deals with examining the validity of key underlying concepts by assessing if basic components and standards are the right ones by examining levels of empirical and expert support. For this study, this approach used Key Indicators to validate the Core Rules since Risk Assessment and Key Indicators are differential monitoring approaches. This answers the first research question.

The second validation approach deals with examining the measurement strategy and the psychometric properties of the measures used by assessing whether the verification process for each rule is yielding accurate results. Properties of the key rules can be measured through inter-rater reliability on observational measures, scoring of documentation, and inter-item correlations to determine if measures are psychometrically sound. Cut scores can be examined to determine the most appropriate ways to combine measures into summary ratings. For this study, the second validation approach validates the use of the ACDW and Core Rules by comparing compliance decisions with the Licensing Studies. This answers the second research question.

The third validation approach deals with assessing the outputs of the licensing process by examining the variation and patterns of program level ratings within and across program types to ensure that the ratings are functioning as intended. The approach examines the relationship of program level ratings to other more broadly based program quality measures and examines alternate cut points and rules to determine how well the ratings distinguish different levels of quality. For this study, this approach used data from Core Rules and Licensing Studies and data from earlier program quality studies (Maxwell, et al., 2009a,b; 2010) for validation. This answers the third research question.

Out of the four validation approaches (See Table 8), only three were utilized in this study. **The fourth validation approach** deals with how ratings are associated with children’s outcomes. This approach examines the relationship

between program level ratings and selected child outcomes to determine whether higher program ratings are associated with better child outcomes. Data were not available in this study to test this approach.

FINDINGS

The *DMLMA*© (See Figure 1) provides the conceptual model for assessing the overall effectiveness of Georgia’s approach using Core Rules. In the model, the two main tools are Risk Assessment and Key Indicator measurements, which are created from a statistical analysis of the comprehensive licensing tool. The comprehensive licensing tool measures compliance with all rules. For the purposes of this study, the Licensing Study represents the comprehensive licensing tool while the Core Rules represent a Risk Assessment tool. For the Program Quality tools, the ECERS-R, ITERS-R and FCCERS-R were utilized from an earlier program quality study by FPG Child Development Institute at the University of North Carolina at Chapel Hill (Maxwell, et al., 2009a,b; 2010). Georgia currently does not use a Key Indicator tool (see Table 1). With the *DMLMA*© analytical methodology, specific correlational thresholds are expected (please refer to Figure 1 on page 14).

TABLE 1

| <i>DMLMA</i> © Terminology | Georgia Examples and Data Sources |
|------------------------------|---------------------------------------------------------------|
| Comprehensive Tool | Licensing Study |
| Program Quality Tool | ECERS-R and ITERS-R for CCC; FCCERS-R for FCC |
| Risk Assessment Tool | Core Rules |
| Key Indicators Tool | Not Present (Generated as part of this Study-see Tables 9/10) |
| Differential Monitoring Tool | ACDW Compliance Determination |

Before presenting the findings for the validation approaches, some basic descriptive statistics are provided regarding the major variables in this study: Licensing Study, ACDW, Core Rules, and Key Indicators (see Table 2). The data are provided for both child care centers and family child care homes. It is clear from these basic descriptive statistics that the data distributions are very skewed in a positive fashion which means that there is very high compliance with all the major licensing variables for this study. In other words, the majority of programs are in substantial compliance with all the licensing rules and receive a compliant determination.

TABLE 2

| Licensing Variable | Mean | Range | SD | Skewness | Kurtosis |
|-----------------------|------|-------|------|----------|----------|
| Licensing Study (CCC) | 5.51 | 25 | 5.26 | 1.47 | 2.11 |
| ACDW (CCC) | 0.75 | 1 | 0.44 | -1.17 | -0.64 |
| Core Rules (CCC) | 4.47 | 22 | 4.72 | 1.81 | 3.60 |
| Key Indicators (CCC) | 1.68 | 6 | 1.61 | 0.90 | 0.073 |
| Licensing Study (FCC) | 5.85 | 33 | 5.71 | 1.56 | 3.37 |
| ACDW (FCC) | 0.87 | 1 | 0.34 | -2.23 | 3.03 |
| Core Rules (FCC) | 1.61 | 11 | 1.75 | 1.99 | 6.61 |
| Key Indicators (FCC) | 2.37 | 8 | 2.13 | 0.63 | -0.57 |

Licensing Study Mean = the average number of total rule violations. There are over 450 rules examined in a licensing study. Specific numbers vary by specific services providers offer. For example, not all providers offer transportation so these rules would not be examined.

ACDW Mean = the average score for a determination of compliance (1) or non-compliance (0).

Core Rules Mean = the average number of core rule violations. There were over 75 Core Rules examined at the time data was collected for this study.

Key Indicators Mean = the average number of key indicator violations.

The findings are presented by the three validation approaches of Standards, Measures, and Outputs as well as the three research questions related to Key Indicators, Core Rules, and Program Quality.

- 1) Validation of Standards (First Approach to Validation) for answering the first research question: *Do the Core Rules for child care centers (CCC) and family child care (FCC) homes serve as overall key indicators of compliance?***

In this first approach to validation which focuses on Standards, Key Indicators were generated from the Licensing Studies because Core Rules (a Risk Assessment tool) and Key Indicators are both Differential Monitoring approaches (see Figure 1). The Core Rules were compared to the Key Indicators generated by the licensing database and there was a .49 correlation for CCC (n = 104) and .57 correlation for FCC (n = 147) which indicates a relationship between the Core Rules and Key Indicators at a $p < .0001$ significance level (Table 3). Also, the Key Indicators were correlated with the Licensing Study data and significant results were determined with r values of .78 ($p < .0001$) for CCC (n = 104) and .87 ($p < .0001$) for FCC (n = 147). These results clearly met the expected *DMLMA*© thresholds between the key indicator rules with core rules (.50+) and licensing studies (.70+).

TABLE 3

| Key Indicators with Core Rules and Licensing Study | r = | p < | n = |
|-----------------------------------------------------------|------------|---------------|------------|
| Key Indicators and Core Rules (CCC) | .49 | .0001 | 104 |
| Key Indicators and Licensing Study (CCC) | .78 | .0001 | 104 |
| Key Indicators and Core Rules (FCC) | .57 | .0001 | 147 |
| Key Indicators and Licensing Study (FCC) | .87 | .0001 | 147 |

Table 3 begins to demonstrate how the Georgia Child Care Licensing system is utilizing the *DMLMA*© terminology from Table 1. With the generation of Key Indicators from this study, all the key elements within a differential monitoring system are present. This crosswalk to the *DMLMA*© will continue in Tables 4 & 5.

2) Validation of Measures (Second Approach to Validation) for answering the second research question: *Is the Annual Compliance Determination Worksheet (ACDW) a valid measure in determining the overall health and safety compliance of Georgia’s early care and learning programs?*

The Core Rules and the ACDW were compared to the Licensing Study data and compliance designation to determine the validation of the ACDW scoring protocol. There was a high correlation between the number of violations on the Core Rules and the total licensing violations on the Licensing Studies ($r = .69$; $p < .0001$)(Table 4). This result helps to validate that the ACDW is actually discriminating between high compliant and low compliant providers for CCC. For FCC, there was also a high correlation between the number of violations on the Core Rules and the total licensing violations on the Licensing Studies ($r = .74$; $p < .0001$). These results meet the *DMLMA*© thresholds of .50+ for Licensing Studies and Core Rules.

When Core Rules were correlated with the ACDW compliance decisions, there was a significantly high correlation for CCC ($r = .76$; $p < .0001$) and for FCC ($r = .70$; $p < .0001$). The key element of the ACDW scoring protocol is that the Core Rules distinguish between high and low compliant providers. The CCC/Core Rules and ACDW have been validated, as well as the FCC/Core Rules and ACDW because both the correlations were above the expected *DMLMA*© threshold (.50+).

TABLE 4

| Core Rules with Licensing Studies and ACDW | r = | p < | n = |
|---------------------------------------------------|------------|---------------|------------|
| Core Rules and Licensing Studies (CCC) | .69 | .0001 | 104 |
| Core Rules and ACDW (CCC) | .76 | .0001 | 104 |
| Core Rules and Licensing Studies (FCC) | .74 | .0001 | 147 |
| Core Rules and ACDW (FCC) | .70 | .0001 | 147 |

3) Validation of Outputs (Third Approach to Validation) for answering the third research question: *Are the Core Rules correlated with program quality?*

For this approach, programs were divided into those that had an ITERS-R score, an ECERS-R score for a preschool class, and an ECERS-R score for a Georgia’s Pre-K class; and those that had only an ITERS-R score and an ECERS-R score for preschool. The sample was evenly divided. Since Georgia has placed substantial resources into its Pre-K program, it was thought that this analysis might suggest if there was anything different between programs with a Georgia’s Pre-K class and those without.

When the Core Rules for CCC's were compared with program quality data (ECERS-R/PS + ITERS-R), a significant correlation was not found between CCC ($r = .27$) for programs with only preschool classrooms but was found for programs with Pre-K classrooms (ECERS-R/PK + ITERS-R) ($r = .60$). When Core Rules for FCC's were compared to the FCC program quality data (FCCERS-R), the correlations were at a much lower level ($r = .17$) (See Table 5). However, these results are constrained by the limited range of the data; see the Limitation Section that follows this section.

Upon closer inspection of the correlations in Table 5 for CCC, it would appear that the CCC compliance system is more valid in programs with a state funded Pre-K classrooms (.48) than with those that had preschool but not state funded Pre-K programs (.21) because the correlations between the various Environment Rating Scales (ECERS-R + ITERS-R) are significant only when compared to the respective compliance with all rules on the Licensing Studies in the programs that have Pre-K programs. In making these comparisons, programs that had both ECERS-R and ITERS-R were combined and compared to the respective Licensing Study data (these data were reversed scored in which the number of violations were subtracted from a perfect score of 100). The differences are even more significant when you compare the Environment Rating Scales and the Core Rules where the programs with state-funded Pre-K classrooms correlation between the compliance with Core Rules and Environment Rating Scales is .60 and preschool programs is .27 while the FCC is .17.

Program quality data refer to data collected in earlier studies by researchers from FPG (Maxwell, et al., 2009a,b; 2010) in which FPG collected Environment Rating Scales (ECERS-R; ITERS-R; FCCERS-R) data on a representative sample of CCC and FCC (See (<http://dec.al.ga.gov/BftS/ResearchStudyOfQuality.aspx>)). In comparing the program compliance and program quality data, the analyses supported the validation of the CCC for Pre-K only programs (*DMLMA*© threshold = .30+) but it was weaker for the FCC programs and not significant for preschool programs and therefore could not be validated. See Table 13 on page 17 for a further explanation of the CCC data distribution.

TABLE 5
Program Compliance and Quality Comparisons

| | r = | p < | n= |
|--------------------------------------------|------------|---------------|-----------|
| ECERS-R/PK + ITERS-R and Licensing Studies | .48 | .001 | 45 |
| ECERS-R/PK + ITERS-R and Core Rules | .60 | .0001 | 45 |
| ECERS-R/PS + ITERS-R and Licensing Studies | .21 | ns | 45 |
| ECERS-R/PS + ITERS-R and Core Rules | .27 | ns | 45 |
| FCCERS-R and Licensing Studies | .19 | .04 | 146 |
| FCCERS-R and Core Rules | .17 | .03 | 146 |

LIMITATION

The sampling for this study was based on previous studies (Maxwell, 2009a,b; 2010) completed by FPG in which program quality data were collected and analyzed. This study employed a subset of sites that were a representative sample of Georgia's child care licensing system. Not all of these sites could be used for this study because some had closed or some did not have the necessary data to make comparisons. So the sample at this point is one of convenience; however, 104 of the 173 CCC and 146 of the 155 FCC were used in this study, a significant number of the original representative sample. Also, when the Environment Rating Scales (ECERS-R, ITERS-R, FCCERS-R) scores were compared with the CCC and FCC samples, there were no significant differences (average difference was .01-.03) between the two study samples (See Table 6).

TABLE 6
Environment Rating Scale Scores

| | FPG | This Study |
|--------------------------------------|------------|-------------------|
| ECERS-R Pre-K Total Scale Scores | 4.16 | 4.15 |
| ECERS-R Preschool Total Scale Scores | 3.39 | 3.42 |
| ITERS-R Total Scale Scores | 2.74 | 2.72 |
| FCCERS-R Total Scale Scores | 2.50 | 2.49 |

CONCLUSION

The CCC differential monitoring through the Core Rules/ACDW has been validated on the three approaches (Standards, Measures, and Outputs [Pre-K Program only]) and three research questions (Key Indicators, Core Rules, Program Quality [Programs with Georgia Pre-K only]) (See Table 7). The FCC differential monitoring through the Core Rules/ACDW was validated on the first validation approach (Standards) and first research question (Key Indicators); validated on the second validation approach (Measures) and second research question (Core Rules); but not validated on the third validation approach (Outputs) and third research question (Program Quality).

TABLE 7

| Validation Approach/Research Question | Correlations | |
|----------------------------------------------|-------------------------------|------------------------------|
| | CCC Actual (Expected*) | FCC Actual (Expected) |
| 1 STANDARDS/Key Indicators | VALIDATED | VALIDATED |
| Key Indicators x Core Rules | .49 (.50+) | .57 (.50+) |
| Key Indicators x Licensing Studies | .78 (.70+) | .87 (.70+) |
| 2 MEASURES/Core Rules/ACDW ² | VALIDATED | VALIDATED |
| Core Rules x Licensing Studies | .69 (.50+) | .74 (.50+) |
| Core Rules x ACDW | .76 (.50+) | .70 (.50+) |
| 3 OUTPUTS/Program Quality | VALIDATED | NOT VALIDATED |
| Licensing Studies x ERS**/PK | .48 (.30+) | FCCERS .19 (.30+) |
| Core Rules x ERS/PK | .60 (.30+) | FCCERS .17 (.30+) |
| Licensing Studies x ERS/PS | ----- | .21 (.30+) |
| Core Rules x ERS/PS | ----- | .27 (.30+) |

**DMLMA© Expected r Value Thresholds in Order to be Validated (Also see Figure 1 for additional details):*

High correlations (.70+) = Licensing Studies x Key Indicators.

Moderate correlations (.50+) = Licensing Studies x Core Rules; Core Rules x ACDW; Core Rules x Key Indicators; Key Indicators x ACDW.

Lower correlations (.30+) = Program Quality Tools x Licensing Studies; Program Quality x Core Rules; Program Quality x Key Indicators.

Program Quality Tools = ECERS-R, ITERS-R, FCCERS-R.

****ERS = ECERS-R + ITERS-R**

PK = Pre-K program

PS= Preschool program

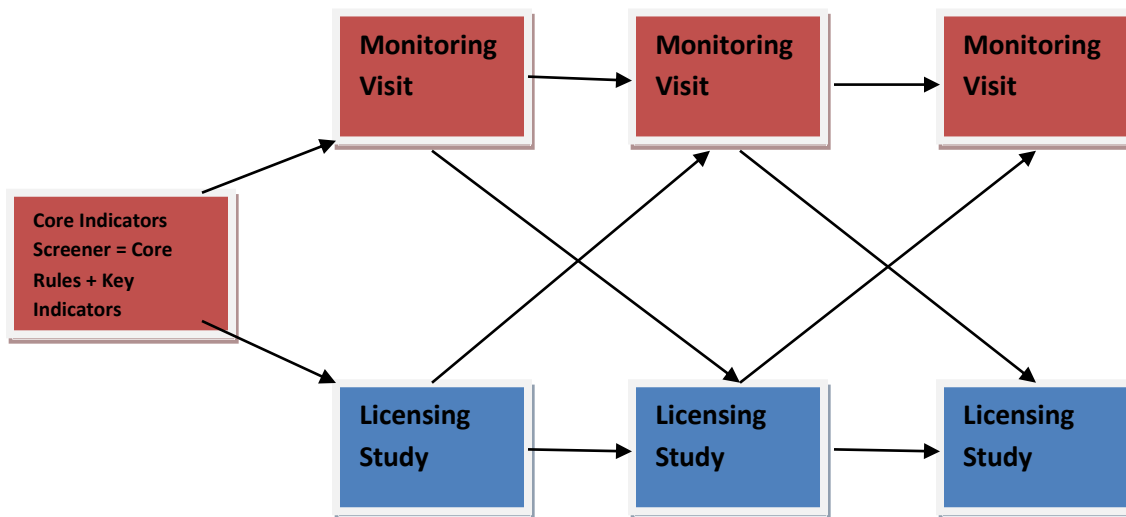
A confounding of data occurred with the first two validation approaches because the Core Rules were influenced a great deal by the National Child Care Key Indicators (NCCKI) (Fiene, 2002) where 10 of the 13 Core Rules overlapped significantly with the NCCKI. This helped to increase the correlation between the Core Rules and the Licensing Studies because the Core Rules represented both risk assessment and key indicator rules. Using both risk assessment and key indicator rules together is an ideal differential monitoring approach (Fiene, 2012). Most states use one or the other but generally not together. By including the newly generated key indicators from this study where there is also overlap with the NCCKI, it should enhance the monitoring approach utilized by DECAL.

². ACDW decisions were compared with using severity as a factor and not using it as a factor in the scoring system with Core Rules. No significant differences were found between the two scoring systems; therefore, the results in this study represent Core Rule scores without severity included since this is the simpler model.

RECOMMENDATIONS

The following recommendations³ can be made from this Licensing Differential Monitoring Validation Study.

- 1) **First research question/validation recommendation:** Revise the worksheet determination scoring relative to the visiting protocol by combining the Core Rules with a Key Indicator approach so that if any of the Core Rules or Key Indicators are out of compliance, then a full compliance review (Licensing Study) should be used. The present worksheet determination scoring protocol is overly complex. Just moving to a more comprehensive review (Licensing Study) based on non-compliance with the Core Rules will simplify the scoring protocol and make determinations more straightforward. If there is full (100%) compliance with the Core Rules and Key Indicators, then the next scheduled review of the program would be an abbreviated Monitoring Visit. If there is not 100% compliance with the Core Rules and Key Indicators, then the next scheduled review of the program would be a Licensing Study reviewing all child care rules. The compliance/non-compliance scores of the Licensing Study will determine how often the program will be visited. A revised Georgia Differential Monitoring System could potentially look like the following:



Compliance Decisions:

Core Indicators = Core Rules + Key Indicators – this becomes a screening tool to determine if a program receives a Licensing Study reviewing all child care rules or an abbreviated Monitoring Visit continuing to review key indicator and core rules for their next visit.

Core Indicators (100%) = the next visit is a Monitoring Visit.. Every 3-4 years a full Licensing Study is conducted.

Core Indicators (not 100%) = The next visit is a Licensing Study where all rules are reviewed.

Compliance = 96%+ with all rules and 100% with Core Indicators. The next visit is a Monitoring Visit.

Non-compliance = less than 96% with all rules. The next visit is a Licensing Study.

- 2) **Second research question/validation recommendation:** Follow the development of weighted risk assessment tools as outlined by Fiene & Kroh (2000) in the *NARA Licensing Chapter* for CCC and FCC homes. It has been over 10 years since these Core Rules were weighted. It is recommended that Core Rules be weighted every 10 years. Doing a weighted risk assessment would help confirm that the present Core Rules are the highest risk rules.
- 3) **Third research question/validation recommendation:** Confirm the CCC (ERS/PS) and FCC results by conducting a more recent program quality study that reflects all the changes made within the CCC and FCC systems. Although FCC program quality and Licensing Study and Core Rules reached statistical significance, the overall correlation was too low (Licensing Studies = .19; Core Rules = .17). With the CCC system the Pre-K program demonstrated significant correlations between ERS/PK and Licensing Study (.48) & Core Rules (.60) but not the preschool program (ERS/PS: Licensing Studies = .21; Core Rules = .27).

³ These recommendations are drawn from the data in this study and previous studies conducted by the author in which the empirical evidence led to similar recommendations.

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TABLE 8 - FOUR APPROACHES TO VALIDATING A QRIS (Zellman & Fiene, 2012)

| Approach | Activities and Purpose | Typical Questions Approach Addresses | Issues and Limitations |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>1. Examine the validity of key underlying concepts</i></p> | <p>Assess whether basic QRIS quality components and standards are the “right” ones by examining levels of empirical and expert support.</p> | <p>Do the quality components capture the key elements of quality? Is there sufficient empirical and expert support for including each standard?</p> | <p>Different QRISs may use different decision rules about what standards to include in the system.</p> |
| <p><i>2. Examine the measurement strategy and the psychometric properties of the measures used to assess quality</i></p> | <p>Examine whether the process used to document and verify each indicator is yielding accurate results.</p> <p>Examine properties of key quality measures, e.g., inter-rater reliability on observational measures, scoring of documentation, and inter-item correlations, to determine if measures are psychometrically sound.</p> <p>Examine the relationships among the component measures to assess whether they are functioning as expected.</p> <p>Examine cut scores and combining rules to determine the most appropriate ways to combine measures of quality standards into summary ratings.</p> | <p>What is the reliability and accuracy of indicators assessed through program administrator self-report or by document review?</p> <p>What is the reliability and accuracy of indicators assessed through observation?</p> <p>Do quality measures perform as expected? (e.g., do subscales emerge as intended by the authors of the measures?)</p> <p>Do measures of similar standards relate more closely to each other than to other measures?</p> <p>Do measures relate to each other in ways consistent with theory?</p> <p>Do different cut scores produce better rating distributions (e.g., programs across all levels rather than programs at only one or two levels) or more meaningful distinctions among programs?</p> | <p>This validation activity is especially important given that some component measures were likely developed in low-stakes settings and have not been examined in the context of QRIS.</p> |

TABLE 8 (continued)

| Approach | Activities and Purpose | Typical Questions Approach Addresses | Issues and Limitations |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>3. Assess the outputs of the rating process</i></p> | <p>Examine variation and patterns of program-level ratings within and across program types to ensure that the ratings are functioning as intended.</p> <p>Examine relationship of program-level ratings to other quality indicators to determine if ratings are assessing quality in expected ways.</p> <p>Examine alternate cut points and rules to determine how well the ratings distinguish different levels of quality.</p> | <p>Do programs with different program-level ratings differ in meaningful ways on alternative quality measures?</p> <p>Do rating distributions vary by program type, e.g., ratings of center-based programs compared to ratings of home-based programs? Are current cut scores and combining rules producing appropriate distributions across rating levels?</p> | <p>These validation activities depend on a reasonable level of confidence about the quality components, standards and indicators as well as the process used to designate ratings.</p> |
| <p><i>4. Examine how ratings are associated with children's outcomes.</i></p> | <p>Examine the relationship between program-level ratings and selected child outcomes to determine whether higher program ratings are associated with better child outcomes.</p> | <p>Do children who attend higher-rated programs have greater gains in skills than children who attend lower-quality programs?</p> | <p>Appropriate demographic and program level control variables must be included in analyses to account for selection factors.</p> <p>Studies could be done on child and program samples to save resources.</p> <p>Findings do not permit attribution of causality about QRIS participation but inferences can be made about how quality influences children's outcomes.</p> |

**FIGURE 1- DIFFERENTIAL MONITORING LOGIC MODEL AND ALGORITHM (Fiene, 2012)
DMLMA© Applied to the Georgia Child Care Licensing System**

$$CI + PQ \Rightarrow RA + KI \Rightarrow DM$$

Georgia Examples:

CI = Comprehensive Tool = Licensing Study (LS – All Rules)

PQ = Program Quality Tool = Environment Rating Scales (ERS = ECERS-R, ITERS-R, FCCERS-R)

RA = Risk Assessment Tool = Core Rules (CR)

KI = Key Indicators Tool = presently Georgia does not have a KI

DM = Differential Monitoring Tool = ACDW (Compliance/Non-Compliance Decision)

A very important concept in this validation study is that the system employed by DECAL is a risk assessment approach rather than a key indicator methodology which is based upon predictor rules. The *DMLMA©* is a new methodology assessing the effectiveness and efficiency of Differential Monitoring systems being used by state regulatory agencies and provides the conceptual model for this study.

DMLMA© Thresholds:
High Correlations (.70+) = CI x KI
Moderate Correlations (.50+) = CI x RA; RA x DM; RA x KI; KI x DM
Lower Correlations (.30+) = PQ x CI; PQ x RA; PQ x KI

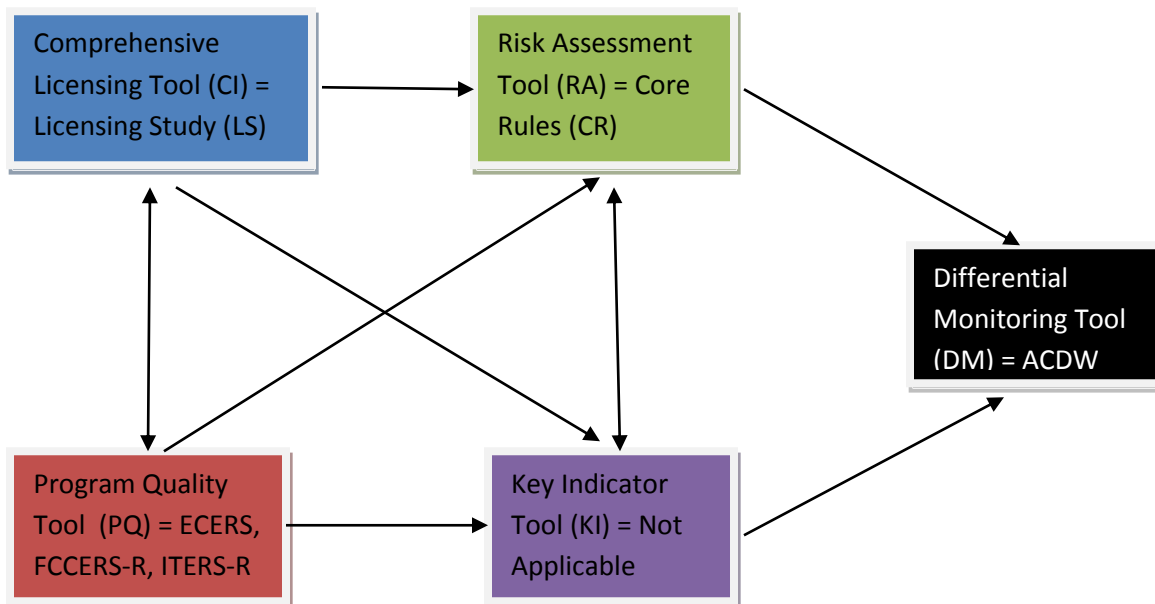


Table 9 - List of Key Indicators for Georgia Child Care Centers with Phi Coefficients

591-1-1-25 (3) requires that the center and surrounding premises be clean, free of debris and in good repair. (Phi = .49)

591-1-1-25 (13) requires that hazardous equipment, materials and supplies be inaccessible to children. (Phi = .46)

591-1-1-26 (6) requires that outdoor equipment be free of hazards such as lead-based paint, sharp corners, rust and splinters. (Phi = .44)

591-1-1-26 (8) requires the playground to be kept clean, free of litter and hazards. (Phi = .59)

591-1-1-26 (7) requires that a resilient surface be provided and maintained beneath the fall zone of climbing and swinging equipment. (Phi = .57)

591-1-1-36 (6)(a-c) requires the center to maintain on the vehicle current information for each child including a) center and passenger information; b) emergency medical information and c) a passenger checklist. (Phi = .49)

591-1-1-14 (1) requires that at least 50% of the caregiver staff have current first aid and CPR training. (Phi = .49)

591-1-1-08 (a)-(f) requires the center to maintain a file for each child while such child is in care and for one year after that child is no longer enrolled.... (Phi = .44)

Table 10 - List of Key Indicators for Georgia Family Child Care Homes with Phi Coefficients

290.2-3-11(2)(C) requires that fire drills be practiced monthly and shall be documented and kept on file for one year. (Phi = .51)

290-2-3-11 (2)(f) requires that poisons, medicines, cleaning agents and other hazardous materials be in locked areas or inaccessible to children. (Phi = .61)

290-2-3-11 (1)(f) requires the family day care home and any vehicle used to have a first aid kit..... (Phi = .57)

290-2-3-07 (4) requires that the provider obtain ten clock hours of training in child care issues from an approved source within the first year and thereafter on an annual basis. (Phi = .58)

290-2-3-08 (1)(a) requires the family day care home to maintain a file for each child that includes the child's name, birth date, parents or guardian's name, home and business addresses and telephone numbers. (Phi = .63)

290-2-3-08 (1)(b) requires that the record for each child contain the names(s), address(es) and telephone number(s) of person(s) to contact in emergencies when the parent cannot be reached. (Phi = .57)

290-2-3-08 (1)(b) requires the family day care home to maintain a file for each child that includes the name, address and telephone number of the child's physician to contact in emergencies. (Phi = .55)

290-2-3-08 (1)(f) requires the family day care home to maintain a file for each child that includes known allergies, physical problems, mental health disorders, mental retardation or developmental disabilities which would limit the child's participation in the program. (Phi = .51)

290-2-3-08 (1)(c) requires the family day care home to maintain a file for each child that includes evidence of age appropriate immunizations or a signed affidavit against such immunizations; enrollment in the home may not continue for more than 30 days without such evidence. (Phi = .72)

Table 11 - Key Indicator Formula Matrix for Generating Key Indicators*

| | <i>Providers In Compliance on Rule</i> | <i>Programs Out Of Compliance on Rule</i> | <i>Row Total</i> |
|---------------------|----------------------------------------|-------------------------------------------|--------------------|
| <i>High Group**</i> | A | B | Y |
| <i>Low Group***</i> | C | D | Z |
| Column Total | W | X | Grand Total |

(* This computation occurred for each licensing rule)

A = High Group + Programs in Compliance on Specific Rule.
B = High Group + Programs out of Compliance on Specific Rule.
C = Low Group + Programs in Compliance on Specific Rule.
D = Low Group + Programs out of Compliance on Specific Rule.
W = Total Number of Programs in Compliance on Specific Rule.
X = Total Number of Programs out of Compliance on Specific Rule.
Y = Total Number of Programs in High Group.
Z = Total Number of Programs in Low Group.

****High Group = Top 25% of Programs in Compliance with all Rules.**
*****Low Group = Bottom 25% of Programs in Compliance with all Rules.**

Figure 2 - Key Indicator Statistical Methodology (Calculating the Phi Coefficient)

$$\phi = (A)(D) - (B)(C) \div \sqrt{(W)(X)(Y)(Z)}$$

Table 12 – Phi Coefficient Decision Table

| Phi Coefficient Range | Characteristic of Indicator | Decision |
|------------------------------|------------------------------------|-----------------------|
| (+1.00) – (+.26) | Good Predictor | Include |
| (+.25) – (-.25) | Unpredictable | Do not Include |
| (-.26) – (-1.00) | Terrible Predictor | Do not Include |

Table 13 - Comparison of the Pre-K and Preschool Programs

| Compliance Level* | Pre-K ECERS-R**(N) | Preschool ECERS-R***(N) |
|--------------------------|---------------------------|--------------------------------|
| 100 | 4.88 (4) | 3.40 (15) |
| 99 | 4.13 (6) | 4.35 (7) |
| 98 | 4.38 (6) | 3.89 (13) |
| 97 | 3.99 (4) | 3.15 (9) |
| 96 | 4.36 (2) | 3.16 (13) |
| 95 | 4.60 (2) | 3.53 (5) |
| 90 | 3.43 (2) | 2.56 (5) |
| 80 | 2.56 (1) | 2.38 (2) |

*Compliance Level = the number of child care rule violations subtracted from 100.

100 = Full Compliance with Rules

99-98 = Substantial Compliance with Rules

97-90 = Medium Level of Compliance with Rules

80 = Low Level of Compliance with Rules

**Pre-K ECERS-R = average score of Pre-K program classrooms as compared to the respective compliance levels (N) = Sample Size.

***Preschool ECERS-R = average score of preschool program classrooms as compared to the respective compliance levels (N) = Sample Size.

From this comparison there is more of a linear relationship between compliance levels and ECERS-R average scores for programs with a state-funded Pre-K classrooms than with the programs with only preschool, non-state funded Pre-K, classrooms where there is more of a curvilinear or plateau effect at the upper end of compliance levels (Full Compliance). A linear rather than curvilinear relationship enhances the possibility of attaining the necessary correlational thresholds (+.30+) for validation for the third approach to validation. When a curvilinear or plateau effect occurs, there is too great a likelihood that programs at a medium level of quality will be introduced into the highest (full) level of compliance. From a public policy standpoint, this is an undesirable result.

The other item to note with the data distributions is that the preschool ECERS-R data are more restricted than the Pre-K Program ECERS-R data. In other words, there is less variance in the preschool program ECERS-R data than in the Pre-K program ECERS-R data.

There is an important limitation in these data that the reader must be aware of in not drawing any conclusions that the presence of a Pre-K program classroom in any way is causing the change in licensing compliance. There is a relationship between the two, but there is no assumption of causality.

Georgia Licensing Validation Technical Elements Appendix

Because of the nature of this report being a state's first attempt at fully validating its Child Care Licensing Core Rule Differential Monitoring Approach utilizing the Zellman & Fiene (2012) Validation Framework and Fiene's *DMLMA* (2012) Model, certain questions surfaced regarding the terminology and the methodology being used in this report. This Technical Elements Appendix provides answers to specific questions that have been raised regarding these methodologies.

1. *How were the multiple years of data handled?*

The Licensing Study data used to make the comparisons are the facility reports that were the earliest facility observations so that these data would be closest to when the program quality data were collected. The other more recent Licensing Studies were not used in this comparison.

2. *If the Core Rules, Key Indicator, and Licensing Study values are counts of violations, how was the fact that different sites had different numbers of visits handled?*

Because only the earliest Licensing Study data were used, the number of visits was not an issue in the scoring.

3. *If the Core Rules, Key Indicator, and Licensing Study values are counts of violations, were all levels of violation risk (low, medium, high, extreme) handled the same?*

Yes, there were very few occurrences of high and extreme in the database, and also no significant differences were found when a sample of the rule violations with and without the levels of violation risk were compared. Therefore the simpler formula in which levels of violation risk were not used was selected.

4. *How did you determine the minimum correlations (DMLMA thresholds) for each analysis? Was this computed separately for this analysis or are the minimum correlations based on previous work?*

The *DMLMA* thresholds were determined from previous research work conducted by the author of this study on this model over the past 30 years. These were the average correlational thresholds that have been proposed for making validation determinations. The reason for utilizing the *DMLMA* model and thresholds is that the Zellman & Fiene (2012) Framework provides guidance in how to select specific validation approaches, what specific questions are answered by the approach and what the limitations of the particular approach are. The *DMLMA* model builds upon this but provides a suggested scoring protocol by comparing correlational thresholds in a specific state to historical trends.

5. *Was Phi calculated for every rule in the Licensing Study? Can the full list be added to the appendix?*

Yes, Phi was calculated for every rule in the Licensing Study, but most of them could not be computed because there was so few rule violations in the majority of the rules. This is typical of state licensing data sets and the full Phi comparisons are not depicted because it does not add any information to the state report.

6. *How did you determine which of the Licensing Study rules should be counted as Key Indicators?*

The Key Indicator statistical methodology is based on a specific cut off point for the Phi Coefficient in which the p values were .0001 or less. This is a very stringent cut off point but it has been found historically that the p values needed to be lowered as the data distributions became more skewed with programs' overall compliance levels increasing over time.

7. *How were sites that had no infant/toddler (i.e., no ITERS score) handled for the third validation approach? How were sites that had only a GA Pre-K (no preschool) handled?*

For scoring purposes only facilities that had both the ECERS and ITERS scores were used in making comparisons with the licensing data related to the third approach to validation. The GA Pre-K were scored and compared in the same way.

8. *On Table 13, why is the number of violations subtracted from 100 (rather than from the maximum possible)?*

Generally this scoring is done because it is more intuitive to think in terms of 100% in compliance as a score of "100" rather than a score of "0." This conversion is used in all state licensing reports that involve the *DMLMA*, Key Indicators and Risk Assessment Methodologies/Models.

FOR ADDITIONAL INFORMATION REGARDING THIS REPORT AND STUDY:

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