

# Kansas Child Care Licensing Key Indicator Study

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## INTRODUCTION

The purpose of this report is to provide the Kansas Child Care Office with basic analyses for the development of their key indicator system for both centers and homes. Licensing data from 2012 taken from both centers (CCC) (n = 482) and homes (FCC) (n = 500) were used in this Licensing Key Indicator study. The centers were further broken down into 52 (11%) Head Start programs and 430 (89%) child care centers. The homes were further broken down into 115 (23%) group homes and 385 (77%) family homes.

### Definitions:

**Key Indicators (KI)** = a differential monitoring approach that employs using only those 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, 8 Key Indicator rules were identified for CCC and 6 Key Indicator rules for FCC. The Key Indicators can be found in the Findings Section of this report.

**Rule Violations or Citations** = this occurs when a program does not meet a specific rule and is cited as being out of compliance with that rule.

## METHODOLOGY

A *Differential Monitoring Logic Model and Algorithm (DMLMA©)*(Fiene, 2012) was employed, in particular, the key indicator methodology to generate the Key Indicators for this project. The DMLMA© is the 4<sup>th</sup> generation of an Early Childhood Program Quality Indicator Model (ECPQIM)(Fiene & Nixon, 1985; Griffin & Fiene, 1995; Fiene & Kroh, 2000).

The DMLMA© (see Figure 1) provides the conceptual model for assessing the overall effectiveness of a differential monitoring system. The two main tools in a Differential Monitoring (DM) system are Risk Assessment (RA) and Key Indicator (KI) measurement tools. Both the Risk Assessment and Key Indicator tools are derived from a comprehensive licensing tool (CI) that measures compliance with all rules. For the purposes of this study the Licensing Data taken from Kansas Monitoring Reviews represents the comprehensive licensing tool (CI). Kansas presently does not use a Risk Assessment or a Program Quality tool (see Table 1).

**Table 1**

<b>DMLMA© Terminology</b>	<b>Kansas Examples and Data Sources</b>
Comprehensive Tool (CI)	Licensing Data from Kansas Monitoring Visits
Program Quality Tool (PQ)	Not Applicable
Risk Assessment Tool (RA)	Not Applicable
Key Indicators (KI)	Generated from this Study
Differential Monitoring (DM)	Not Applicable

## FINDINGS

There are some overall demographic findings presented first that help to put the results in context. As mentioned in the introduction there were 482 centers and 500 homes that were part of these analyses. Eleven percent (11%) of the centers were 100% in compliance with all rules while 25% of the homes were 100% in compliance with all rules. These figures are fairly typical of state averages. The average number of violations for centers was 7.44 violations with all applicable rules and 3.52 violations for homes.

Location of the various facilities seemed to have an impact on average violations recorded. For example, with centers, urban facilities had a significantly higher level of violations (8.42 average violations; n = 279) than facilities located in rural communities (6.09 average violations; n = 203). This result was statistically significant (F = 14.19; p < .0001). However, the differences for homes was not statistically significant, with urban homes (n = 222) having 3.64 average violations versus 3.42 average violations for rural homes (n = 278).

There were statistically significant differences depending on the Region the facilities were located in. For centers, the highest levels of violations with child care rules were in Regions 1 (9.30 average violations; n = 109) and 2 (8.32 average violations; n = 191) while Regions 3 (5.31 average violations; n = 121) and 4 (5.57 average violations; n = 61) had lower averages (see Table 2). This result is statistically significant (F = 9.82; p < .0001).

**Table 2: Violation Data in Centers and Homes by Regional Location**

Region	Centers		Homes	
	Violations*	Number	Violations*	Number
1	9.30	109	2.42	117
2	8.32	191	4.63	120
3	5.31	121	3.94	138
4	5.57	61	3.02	125

\* = *Average Violations (Mean)*

For homes, a slightly different distribution occurs in which Region 2 (4.63 average violations; n = 120) was significantly higher than the other three regions. This result is statistically significant (F = 7.24; p < .0001).

Also the type of licensing inspection saw some variation in the average number of violations although none of the following results were statistically significant (see Table 3).

**Table 3: Violation Data in Centers and Homes by Type of Licensing Inspection**

License Type	Centers		Homes	
	Violations*	Number	Violations*	Number
Initial	7.44	36	3.35	20
Renewal	7.07	368	3.53	469
Amendment	9.51	55	4.00	2
Correction	6.71	14	3.00	8
Temporary	11.22	9	4.00	1

\* = *Average Violations (Mean)*

The last demographic analysis was to compare the average number of violations between group homes and family homes; and between child care centers and Head Start programs. There was not a significant difference between group homes (3.75 average violations; n = 115) and family homes (3.45 average violations; n = 385); but a statistically significant difference occurred (F = 10.44; p < .001) between child care centers (7.78 average violations; n = 430) and Head Start programs (4.60 average violations; n = 52) with the Head Start programs having significantly fewer rule violations.

## Key Indicator Findings

The following findings will provide the Key Indicators for centers (child care centers and Head Start) and homes (family and group homes). It will provide a listing of the rules and the respective phi coefficients. These Key Indicators were obtained from rank ordering the total compliance scores into quartiles with the 25% highest violation scores for facilities as the low group and the lowest 25% violation scores for facilities as the high group. Each rule was compared to this result by their respective compliance level, either being in or out of compliance with the rule. Once these data were prepared the formula in Table 4 was used to determine if the rule met the predictive level. Separate analyses for generating Key Indicators were not run for Head Start or Group Homes because of the insufficient number of programs in each category.

### Centers (Child Care Centers and Head Start)(See Table 5 for a Summary)

All results are reported with the specific rule,  $p < .0001$ , and phi coefficient from the formula in Table 4.

K.A.R.28-4-126b1. Each person regularly caring for children shall have a health assessment conducted by a licensed physician or by a nurse trained to perform health assessments. The health assessment shall be conducted no earlier than one year before the date of employment or initial application for a license or certificate of registration, or not later than 30 days after the date of employment or initial application. (phi = .59)

K.A.R.28-4-126c1. Each person living, working or regularly volunteering in the facility shall have a record of a negative tuberculin test or x-ray obtained not more than two years before the employment or initial application, for a license or certificate of registration or not later than 30 days after the date of employment or initial application. (phi = .62)

K.A.R.28-4-423a18. The premises shall be maintained in good condition and shall be clean at all times, free from accumulated dirt and trash, and any evidence of vermin or rodent infestation. Each outdoor trash and garbage container shall be covered, and the contents shall be removed at least weekly. (phi = .59)

K.A.R.28-4-423a23. Medicines, household poisons, and other dangerous substances and instruments shall be in locked storage. (phi = .60)

K.A.R.28-4-428aa3. Each licensee shall ensure that orientation is completed by each staff member who will be counted in the staff-child ratio and by each volunteer who will be counted in the staff-child ratio. Each staff member and volunteer shall complete the orientation within seven calendar days after the date of employment or volunteering and before the staff member or volunteer is given sole responsibility for the care and supervision of children. (phi = .51)

K.A.R.28-4-428ac1. Each staff member counted in the staff-child ratio, each volunteer counted in the staff-child ratio, and each program director shall obtain certification in pediatric first aid and in pediatric CPR as specified in this subsection either before the date of employment or volunteering or not later than 30 calendar days after the date of employment or volunteering. (phi = .53)

K.A.R.28-4-430c3. Each staff member shall be trained to observe symptoms of illness, neglect, and child abuse, and shall observe each child's physical condition daily. (phi = .54)

K.A.R.28-4-437d. The outdoor play space shall be well drained and free of hazards. (phi = .59)

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Footnote:

Child Care Centers (CCC) – The correlation between the Key Indicators and all the rules was .77.  
Family Child Care (FCC) – The correlation between the Key Indicators and all the rules was .80.  
Both these results exceed the DMLMA© Thresholds for KI x CI (.70).

**Homes (Family and Group Homes)(See Table 5 for a Summary)**

All results are reported with the specific rule,  $p < .0001$ , and phi coefficient from the formula in Table 4.

K.A.R.28-4-115g1. All household cleaning supplies and all bodily care products bearing warning labels to keep out of reach of children or containing alcohol shall be in locked storage or stored out of reach of children under six years of age. Soap used for hand washing may be kept unlocked and placed on the back of the counter by a bathroom or kitchen sink. (phi = .47)

K.A.R.28-4-115aa1A. Supervision plan. Each applicant, each applicant with a temporary permit, and each licensee shall develop a supervision plan for children in care that includes all age ranges of children for whom care will be provided. A copy of the plan shall be available for review by the parents or legal guardians of children in care and by the department. The plan shall include the following: A description of the rooms, levels, or areas of the facility including indoor and outdoor areas in which the child will participate in activities, have snacks or meals, nap, or sleep. (phi = .79)

K.A.R.28-4-115aa1B. Supervision plan. Each applicant, each applicant with a temporary permit, and each licensee shall develop a supervision plan for children in care that includes all age ranges of children for whom care will be provided. A copy of the plan shall be available for review by the parents or legal guardians of children in care and by the department. The plan shall include the following: the manner in which supervision will be provided. (phi = .44)

K.A.R.28-4-117a1. A completed medical record on a form supplied by the department shall be on file for each child under 11 years of age enrolled for care and for each child under 16 living in the child care facility. (phi = .44)

K.A.R.28-4-117c. Immunizations for each child, including each child of the provider under 16 years of age shall be current as medically appropriate and shall be maintained current for protection from the diseases specified in K.A.R. 28-1-20(d). A record of each child's immunizations shall be maintained on the child's medical record. (phi = .68)

K.A.R.28-4-127b1A. Emergency medical treatment: Each facility shall have on file at the facility for each child: written permission of the parent, guardian, or legal custodian for emergency medical treatment on a form that meets the requirements of the hospital or clinic where emergency medical care will be given. (phi = .53)

**References**

- Fiene (2012). *Differential monitoring logic model and algorithm (DMLMA©)*. Middletown, PA: Research Institute for Key Indicators.
- Fiene (2007). Child Development Program Evaluation & Caregiver Observation Scale, in T Halle (Ed.), *Early Care and Education Quality Measures Compendium*, Washington, D.C.: Child Trends.
- Fiene (2003). Licensing related indicators of quality child care, *Child Care Bulletin*, Winter 2002-2003, pps 12-13.
- Fiene (2002). *Thirteen indicators of quality child care: Research update*. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, US Department of Health and Human Services.
- Fiene (1985). Measuring the effectiveness of regulations, *New England Journal of Human Services*, 5(2), 38-39.
- Fiene & Kroh (2000). Licensing Measurement and Systems, *NARA Licensing Curriculum*. Washington, D.C.: National Association for Regulatory Administration.
- Fiene & Nixon (1985). Instrument based program monitoring and the indicator checklist for child care, *Child Care Quarterly*, 14(3), 198-214.
- Griffin & Fiene (1995). *A systematic approach to policy planning and quality improvement for child care: A technical manual for state administrators*. Washington, D.C.: National Center for Clinical Infant Programs-Zero to Three.

**Table 4: Kansas Key Indicator (KSKI) Formula Matrix**

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

**Key Indicator Statistical Methodology (Calculating the Phi Coefficient):**

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

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*A = High Group + Programs in Compliance on Specific Compliance Measure.*  
*B = High Group + Programs out of Compliance on Specific Compliance Measure.*  
*C = Low Group + Programs in Compliance on Specific Compliance Measure.*  
*D = Low Group + Programs out of Compliance on Specific Compliance Measure.*

*W = Total Number of Programs in Compliance on Specific Compliance Measure.*  
*X = Total Number of Programs out of Compliance on Specific Compliance Measure.*  
*Y = Total Number of Programs in High Group.*  
*Z = Total Number of Programs in Low Group.*

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

<b>Phi Coefficient Range</b>	<b>Characteristic of Indicator</b>	<b>Decision</b>
<b>(+1.00) – (+.26)</b>	<b>Good Predictor</b>	<b>Include on KSKI</b>
<b>(+.25) – (0)</b>	<b>Too Easy</b>	<b>Do not Include</b>
<b>(0) – (-.25)</b>	<b>Too Difficult</b>	<b>Do not Include</b>
<b>(-.26) – (-1.00)</b>	<b>Terrible Predictor</b>	<b>Do not Include</b>

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

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

***Kansas Examples:***

- CI = Licensing Reviews (All Rules)
- PQ = Not Applicable (NA)
- RA = Not Applicable (NA)
- KI = Key Indicators (generated from this study)
- DM = Not Applicable (NA)

**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.*

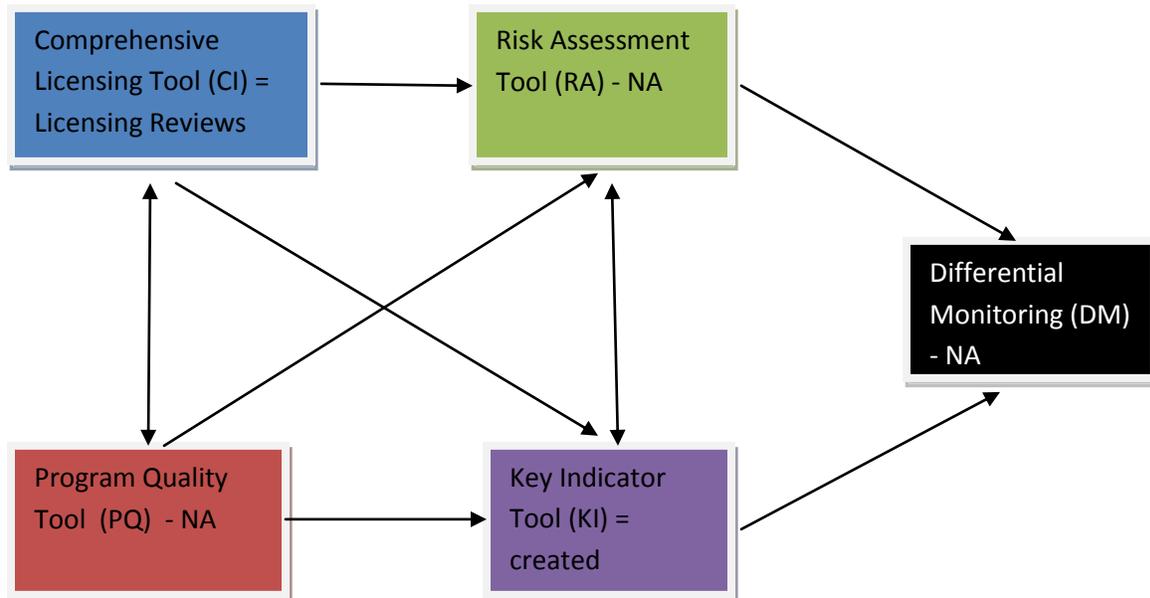


Table 5 – Rule Numbers and Phi Coefficients for Centers and Homes

<b>Centers</b>		<b>Homes</b>	
<b>Rule</b>	<b>Phi</b>	<b>Rule</b>	<b>Phi</b>
K.A.R.28-4-126b1.	.59	K.A.R.28-4-115g1.	.47
K.A.R.28-4-126c1.	.62	K.A.R.28-4-115aa1A.	.79
K.A.R.28-4-423a18.	.59	K.A.R.28-4-115aa1B.	.44
K.A.R.28-4-423a23.	.60	K.A.R.28-4-117a1.	.44
K.A.R.28-4-428aa3.	.51	K.A.R.28-4-117c.	.68
K.A.R.28-4-428ac1.	.53	K.A.R.28-4-127b1A.	.53
K.A.R.28-4-430c3.	.54		
K.A.R.28-4-437d.	.59		

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