

New York Quality Indicators Project: Group Child Care Home Key Indicators (Renewal and Monitoring Inspections)

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These are the results from the key indicator analyses performed on the randomly selected 400 group child care home providers who comply with the 416 Rules for announced Renewal Inspections and 400 group child care home providers who had unannounced Monitoring inspections completed. Specific reference and documentation for the key indicator analyses and methodology can be found in Appendix 1.

As with all early care and education (ECE) licensing quality assurance data sets the data from the above two groups is highly skewed which means that the majority of programs are in full compliance (100%) with all the group child care home rules/regulations. In the sample drawn for the Renewal Inspections, 64% of the programs were in full compliance while for the Monitoring Inspections, 87% of the programs were in full compliance. See Appendix 2.

Table 1 contains the specific key indicators from the Renewal Inspections while Table 2 contains the specific key indicators from the Monitoring Inspections.

Table 1 - Renewal Inspections

Rule Number	Content	Phi
416.5.L.3	Vaccine for pets	.29
416.5.A	Hazard free	.26
416.7.L	Sleeping and napping arrangements	.42
416.11.A.3	Child Immunizations	.27
416.11.H.1.l	Parent consent for emergency medical treatment	.25
416.12.O	Infant formula	.27
416.12.Q	Bottles labeled	.25
416.15.C.3	Emergency contact information	.35
416.15.C.4	Adults who have permission to pick up child	.38
416.15.C.6	Daily record of illnesses, injury, indicators of abuse	.33

These above 10 rules statistically predict overall compliance with all the rules. They represent about 4% of the total number of rules.

Monitoring Inspections

These are the results from the key indicator analyses performed on the randomly selected 400 group child care home providers who comply with the 416 Rules for unannounced Monitoring Inspections.

Table 2 - Monitoring Inspections

Rule Number	Content	Phi
416.4.H.4	Paths of egress free of obstacles	.28
416.5.J	Toxic items are inaccessible	.31
416.8.A	Supervision at all times	.44
416.8.E	Approved primary caregiver present	.35
416.8.J.1	Adult child ratio for preschoolers & school age	.28
416.8.J.2	Two caregivers present when 6+children	.34
416.8.J.3	Adult child ratio for infant & toddlers	.33
416.14.M	First aid and CPR	.52
416.15.B.12	Any changes to the home reported	.29
416.15.B.20	Supervision by approved primary caregiver	.38

These above 10 rules statistically predict overall compliance with all the monitoring rules. These 10 rules represent 77% of the total monitoring rules reviewed on any inspection. These results support the use of unannounced monitoring inspections as a very effective and efficient means of assuring an overall quality assurance in the licensing system.

However, it is not recommended that only these monitoring predictive rules be used, the State of New York should consider using the Monitoring Inspection Protocol along with the newly generated key indicators from the Renewal Inspection analyses as delineated in Table 1. The data from Table 1 were generated from full licensing inspections where all the rules were reviewed. By using both sets of key indicators, the state will balance the predictive and risk assessment aspects in their quality assurance licensing system.

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Appendix 1: TECHNICAL ASPECTS OF THE KEY INDICATOR METHODOLOGY

This section provides the technical and statistical aspects of the key indicator methodology. One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each child care rule (see Figure 1).

Figure 1	<i>Providers In Compliance on Rule</i>	<i>Programs Out Of Compliance on Rule</i>	<i>Row Total</i>
<i>Highest level (top 20-25%)</i>	<i>A</i>	<i>B</i>	<i>Y</i>
<i>Lowest level (bottom 20-25%)</i>	<i>C</i>	<i>D</i>	<i>Z</i>
<i>Column Total</i>	<i>W</i>	<i>X</i>	<i>Grand Total</i>

Once the data are sorted in the above matrix, the following formula (Figure 2) is used to determine if the rule is a key indicator or not by calculating its respective Phi coefficient. Please refer back to Figure 1 for the actual placement within the cells. The legend (Figure 3) below the formula shows how the cells are defined.

Figure 2 – Formula for Phi Coefficient

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

Figure 3 – Legend for the Cells within the Phi Coefficient

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.

Once the data are run through the formula in Figure 2, the following chart (Figure 4) can be used to make the final determination of including or not including the rule as a key indicator. Based upon the chart in Figure 4, it is best to have a Phi Coefficient approaching +1.00 however that is rarely attained with licensing data but has occurred in more normally distributed data.

Continuing with the chart in Figure 4, if the Phi Coefficient is between +.25 and -.25, this indicates that the indicator rule is unpredictable in being able to predict overall compliance with the full set of rules. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance. This can occur with Phi Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other rules could be found out of compliance. Another solution is to increase the number of key indicator rules to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Phi Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator rule would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

Figure 4 – Thresholds for the Phi Coefficient

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

APPENDIX 2

Figure 5 – Bar Chart of Renewal Inspections Compliance Levels (Number of Violations)

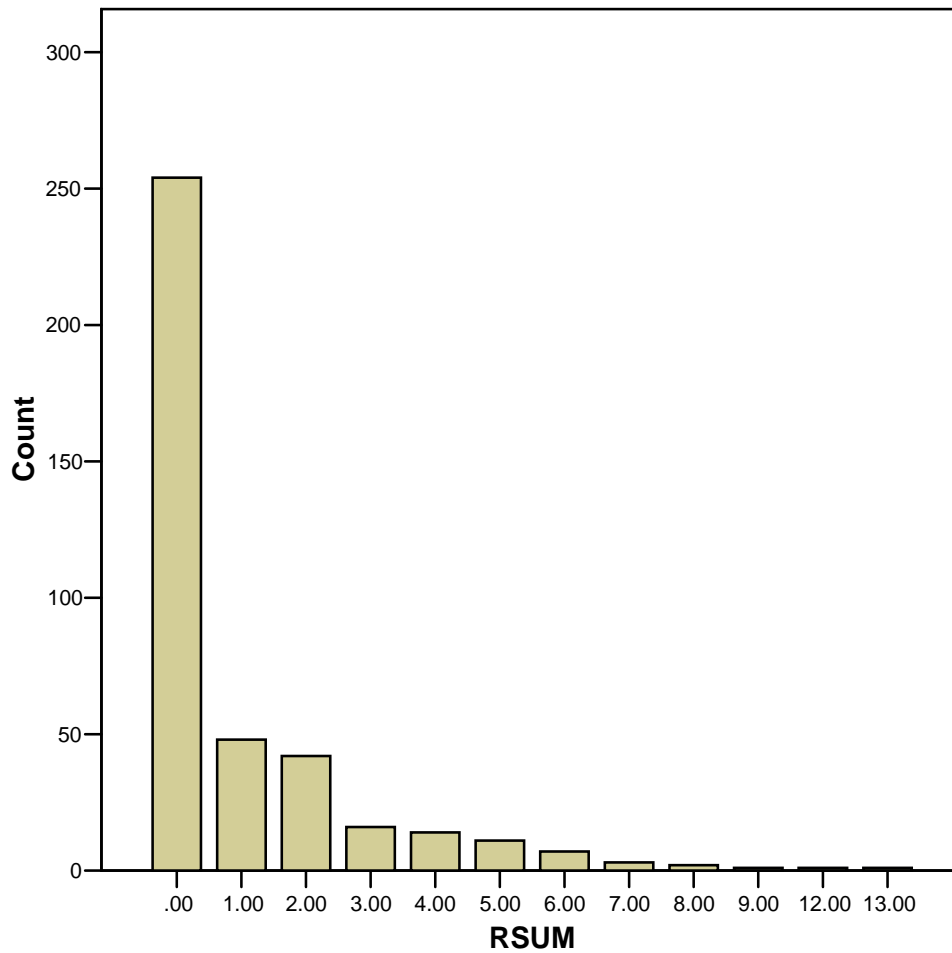


Figure 6 – Bar Chart of Monitoring Inspections Compliance Levels (Number of Violations)

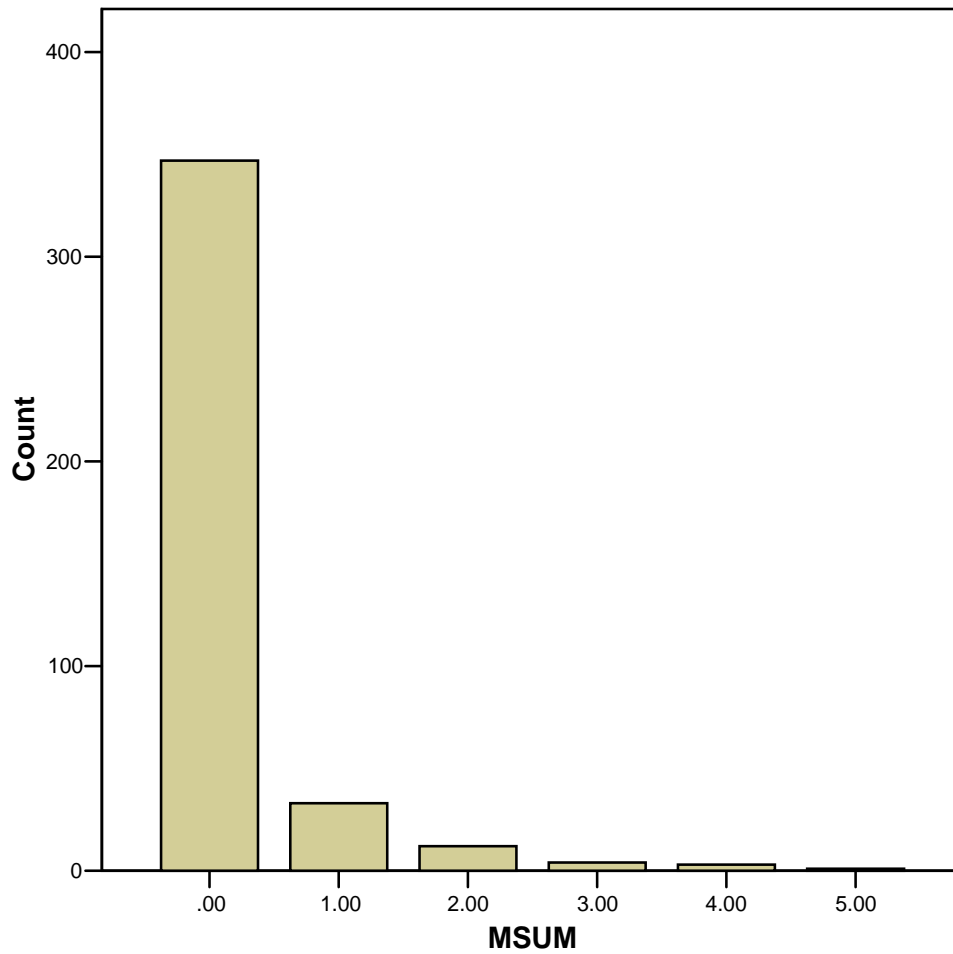


Figure 7 – Line Chart of Renewal Inspections Compliance Levels (Number of Violations)

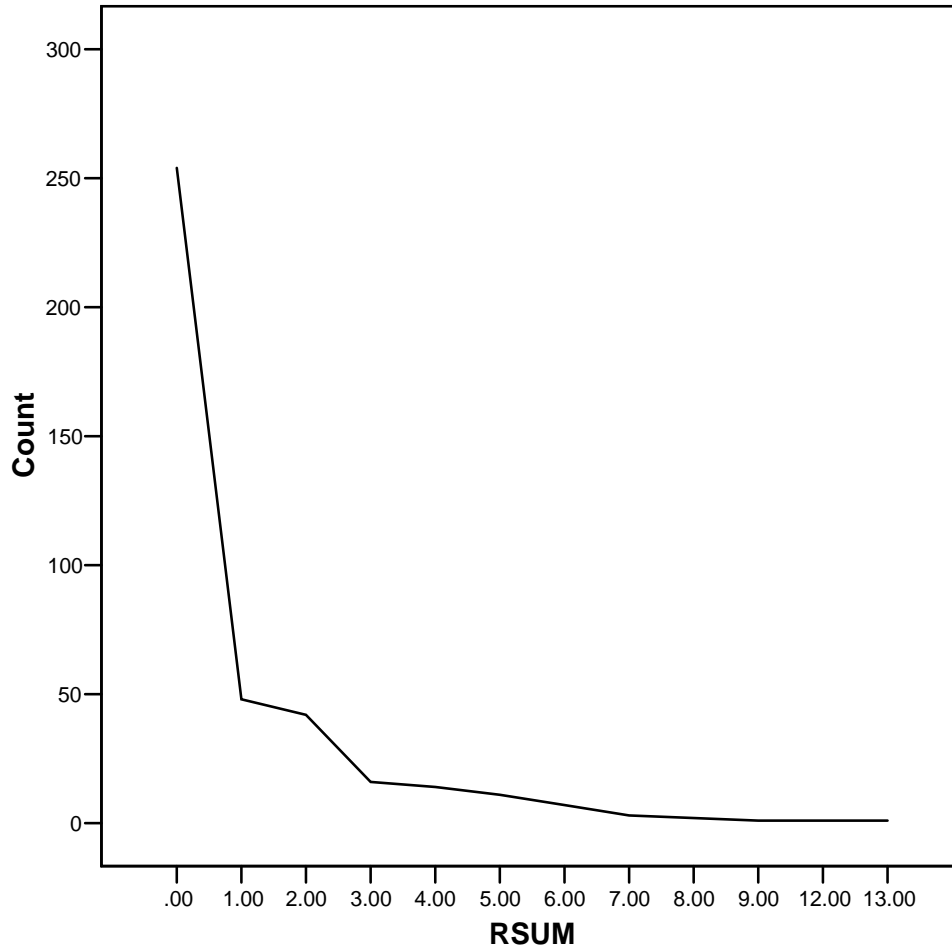


Figure 8 – Line Chart of Monitoring Inspections Compliance Levels (Number of Violations)

