

DIFFERENTIAL MONITORING LOGIC MODEL (DMLM©): A NEW EARLY CHILDHOOD PROGRAM QUALITY INDICATOR MODEL (ECPQIM⁴©) FOR EARLY CARE AND EDUCATION REGULATORY AGENCIES

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December 2014

This Differential Monitoring Logic Model (DMLM©) provides a new Early Childhood Program Quality Indicator Model (ECPQIM⁴©) in which the major monitoring systems in early care and education are integrated conceptually so that the overall early care and education system can be assessed and validated. With this new model, it is now possible to compare results obtained from licensing systems, quality rating and improvement systems (QRIS), risk assessment systems, key indicator systems, technical assistance, and child development/early learning outcome systems (see Figures 1 & 2 for a graphical depiction of the theoretical underpinnings and actual design & logic model for the ECPQIM⁴©/DMLM).

The DMLM© can be used by state agencies (child care, child residential, adult residential (just replace Child Outcomes with Adult Outcomes)), Federal agencies (Head Start, child care, Pre-K), and large provider organizations where an economy of scale is required. This model can be used with state as well as national standards, such as state licensing rules/regulations and *Head Start Performance Standards* or *Caring for Our Children/Stepping Stones*. Most states and Federal agencies have either some or all of the key elements of this model in their overall monitoring systems. The purpose of this model is to alter a one-size fits all monitoring system to one that is targeted, spending more time with problem programs who need additional assistance. This is a cost neutral model that is both cost effective and efficient and re-allocates resources from the compliant programs to the non-compliant programs.

Key Elements (see Figure 2): **CI** = state or federal standards, usually rules or regulations that measure health and safety - *Caring for Our Children* or *Head Start Performance Standards* will be applicable here. **PQ** = Quality Rating and Improvement Systems (QRIS) standards at the state level; ERS (ECERS, ITERS, FDCRS), CLASS, or CDPES (Fiene, 2007). **RA** = risk assessment tools/systems in which only the most critical rules/standards are measured. *Stepping Stones* is an example of this approach. **KI** = key indicators in which only predictor rules/standards are measured. The *Thirteen Indicators of Quality Child Care* is an example of this approach. **DM** = differential monitoring decision making in which it is determined if a program is in compliance or not and the number of visits/the number of rules/standards are ascertained from a scoring protocol. **PD** = technical assistance/training and/or professional

development system which provides targeted assistance to the program based upon the **DM** results. **CO** = child outcomes which assesses how well the children are developing which is the ultimate goal of the system.

Once the above key elements are in place, it is then possible to look at the relationships amongst them to determine if the system is operating as it was intended; in other words, to determine if the DM system is improving the health, safety, program quality and ultimately the overall development of the children it serves.

The DMLM© provides a cross-cutting methodology that can be used in all early care and education delivery systems as well as in other human services. In the past many of these monitoring systems have functioned in silos. The DMLM© integrates all these various monitoring systems together so that the overall monitoring system can be validated as being cost effective and efficient.

STATE AGENCY PLAN for implementing a Differential Monitoring System:

The **first step** in utilizing the DMLM© for a state is to take a close look at its Comprehensive Licensing Tool (CI) that it uses to collect violation data on all rules with all facilities in its respective state. If the state does not utilize a tool or checklist or does not review all violation data than it needs to consider these changes because the DMLM© is based upon an Instrument Based Program Monitoring System (IPM) which utilizes tools/checklists to collect data on all rules.

The **second step** for the state is to compare their state's rules with the National *Health and Safety Performance Standards (Caring for Our Children)* to determine the overlap and coverage between the two.

The **third step** for the state if it utilizes a Risk Assessment (RA) tool is to assess the relationship between this tool and *Stepping Stones* to determine the overlap and coverage between the two.

The **fourth step** for the state is to compare the results from the CI with the RA tools.

In the **fifth step**, if a state is fortunate enough to have a QRIS – Quality Rating and Improvement System in place and has sufficient program quality (PQ) data available then they will have the ability to compare results from their CI tool with their PQ tool and validate outputs by determining the relationship between compliance with health and safety rules (CI) and program quality (PQ) measures, such as the ERS's, CLASS, CDPES, etc... This is a very important step because very few empirical demonstrations appear in the research literature regarding this relationship.

The **sixth step** is for the state to generate a Key Indicator (KI) tool from the CI data base. Please see Fiene & Nixon (1985) and Fiene & Kroh (2000) for a detailed explanation of the methodology for generating a KI tool. If a state did not want to use the KI methodology, a direct comparison could be drawn from The *Thirteen Indicators of Quality Child Care* (Fiene, 2002).

The **seventh step** for the state is to use the RA and KI tools together to determine overall compliance of facilities and how often and which rules will be monitored for future visits. This is the basic component of a Differential Monitoring (DM) approach. Also, this step should drive decisions within the technical assistance/training/professional development (PD) system in what resources are allocated to a particular facility.

The **eighth and final step** for the state is to compare the results from the various monitoring tools (CI, PQ, RA, KI) with any child development outcome (CO) data they collect. This is a relatively new area and few, if any, states at this point have this capability on a large scale. However, as Early Learning Networks/Systems and Standards (ELS) are developed, this will become more common place.

The ECPQIM⁴©DMLM© is presented without two additional items that were present in the 2012/2013 versions which are important to note. The algorithm (Fiene, 2012, 1013) and validation framework (Zellman & Fiene, 2012) are not presented because the author felt that these two components took away from a more direct presentation of differential monitoring. For those interested readers, please refer to my previous abstracts (Fiene, 2012, 2013) which included the algorithm and validation frameworks.

Just a brief word about the Theoretical Underpinnings for ECPQIM⁴. This graphic (Figure 1) attempts to provide the relationships amongst public policy, interventions, and empirical evidence through the lens of translational research, implementation science, and program monitoring. In constructing the ECPQIM⁴ I have borrowed concepts from each area and integrated them in a model for monitoring early care and education programs. The graphic provides a means for displaying the relationships and potential intersections as well as the content that is important to each scientific/research field.

Figure 3 is provided as additional information regarding differential monitoring conceptually without all the details as in figure 2; and figure 4 is provided to demonstrate the impact that a state's licensing law can have on using the Key Indicators and Risk Assessment methodologies. Also, taking Figure 2 and attempting to quantify these relationships, I am proposing the following scoring protocol as depicted in Table 1. This can provide a numerical means of comparing various differential monitoring systems and their relative strength. This protocol could be a useful tool in future research for determining which combinations work best.

Table 1: Differential Monitoring Scoring Protocol© (Fiene, 2014)

Score	Systems Present
0	No systems in place.
2	KI or RA in place and not linked.
4	(KI & RA in place but not linked) or (PC + PQ are linked).
6	(KI & RA in place) & (KI + RA are linked)
8	(KI & RA in place but not linked) & ((PC + PQ) are linked).
10	All systems in place and linked.

RELATED PUBLICATIONS:

Fiene (2012/2013). Early childhood program quality indicator model (ECPQIM⁴©): Differential monitoring logic model and algorithm (DMLMA©), Middletown, PA: Research Institute for Key Indicators LLC (RIKI).

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 (1981). A new tool for day care monitoring introduced by children's consortium, *Evaluation Practice*, 1(2), 10-11.

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.

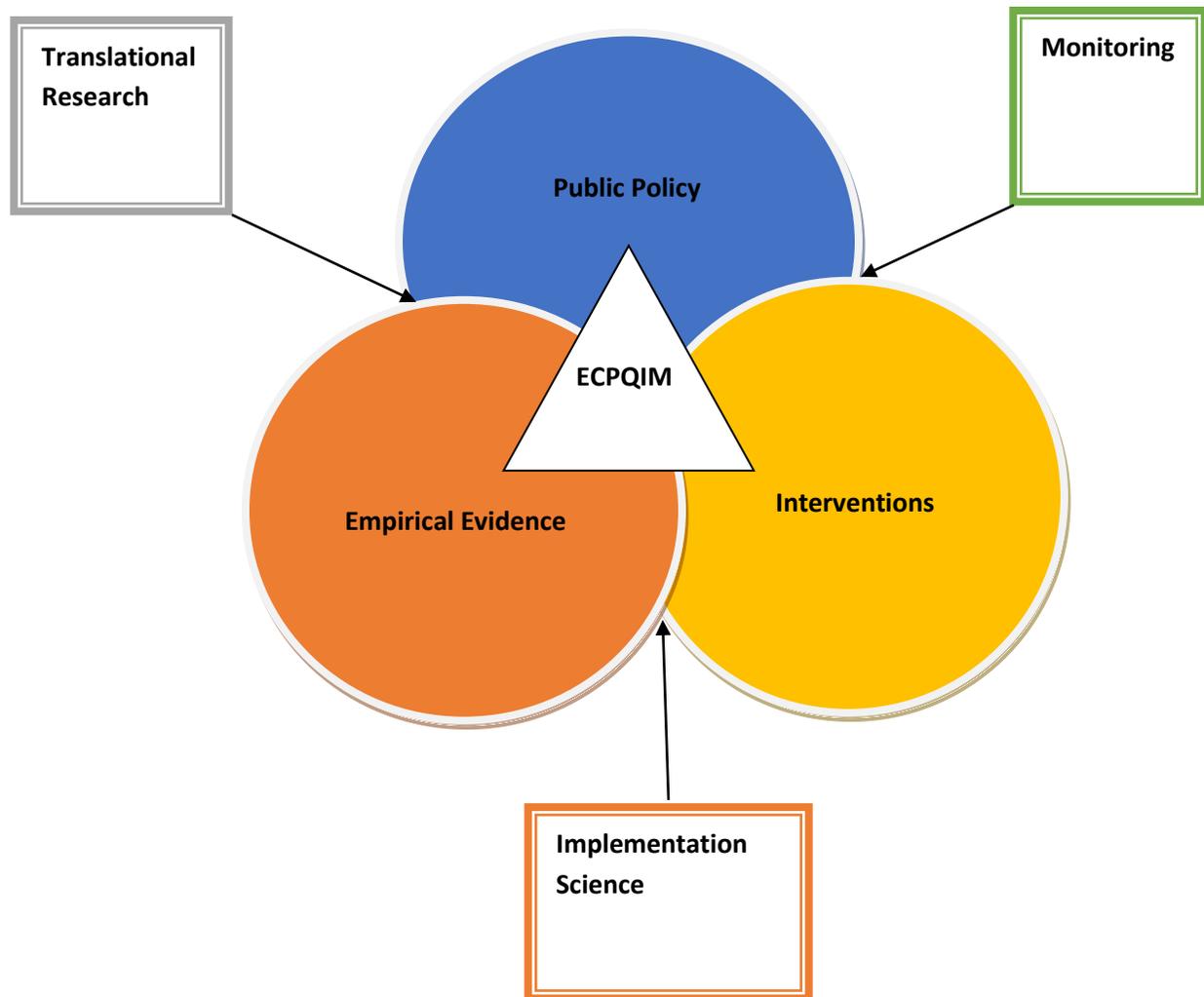
Griffin & Fiene (1995). *A systematic approach to policy planning and quality improvement for child care: A technical manual for state administrators*. Washington, D.C.: National Center for Clinical Infant Programs-Zero to Three.

Morgan, Stevenson, Fiene, & Stephens (1986). Gaps and excesses in the regulation of child day care, *Reviews of Infectious Diseases--Infectious Diseases in Child Day Care: Management and Prevention*, 8(4), 634-643.

Zellman, G. L. and Fiene, R. (2012). *Validation of Quality Rating and Improvement Systems for Early Care and Education and School-Age Care*, Research-to-Policy, Research-to-Practice Brief OPRE 2012. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Figure 1

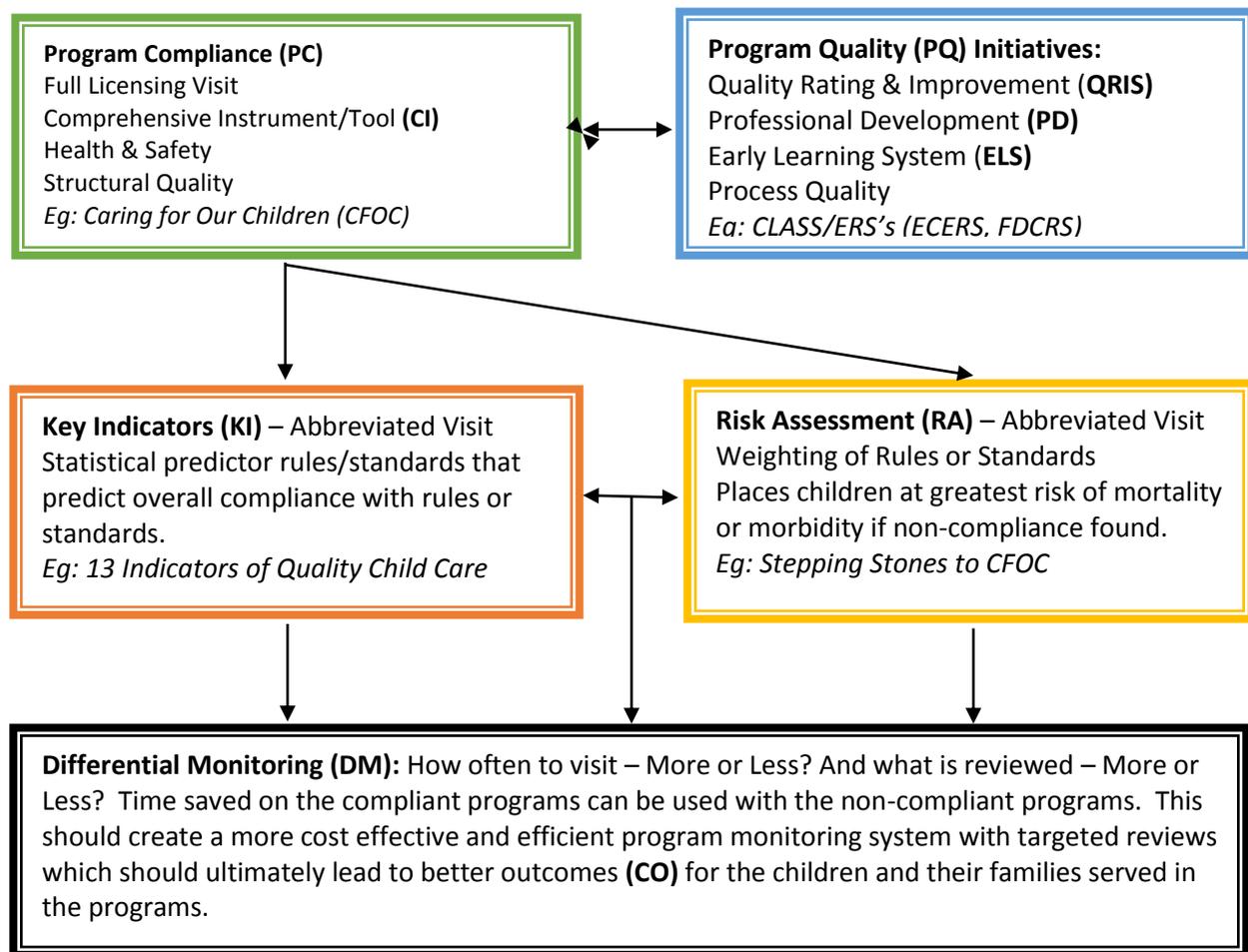
The Scientific Underpinnings for ECPQIM⁴: Early Childhood Program Quality Indicator Model©



ECPQIM⁴© Fiene (2014)

Figure 2

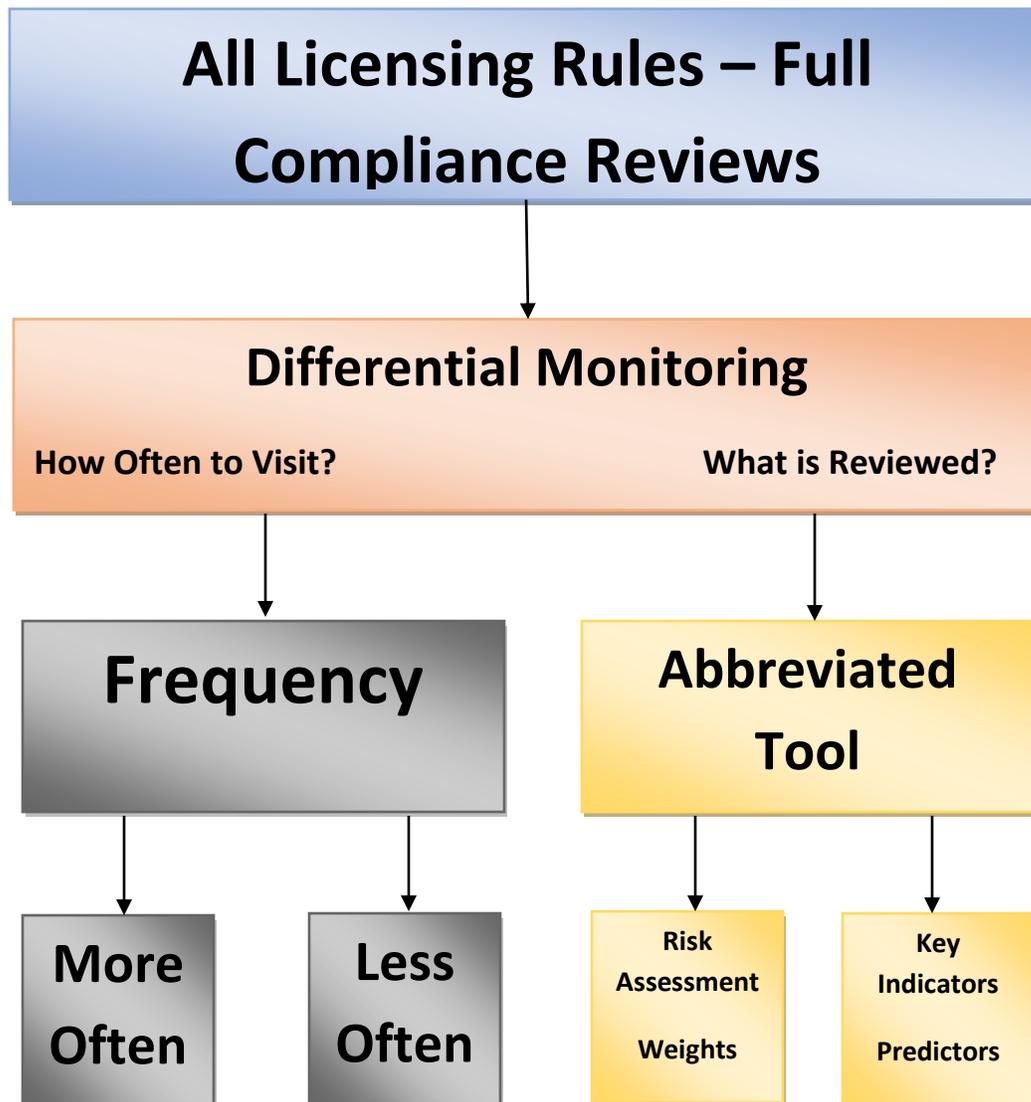
**Early Childhood Program Quality Indicator Model (ECPQIM⁴©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
Comprehensive National Example**



DMLM© Fiene (2014)

Figure 3

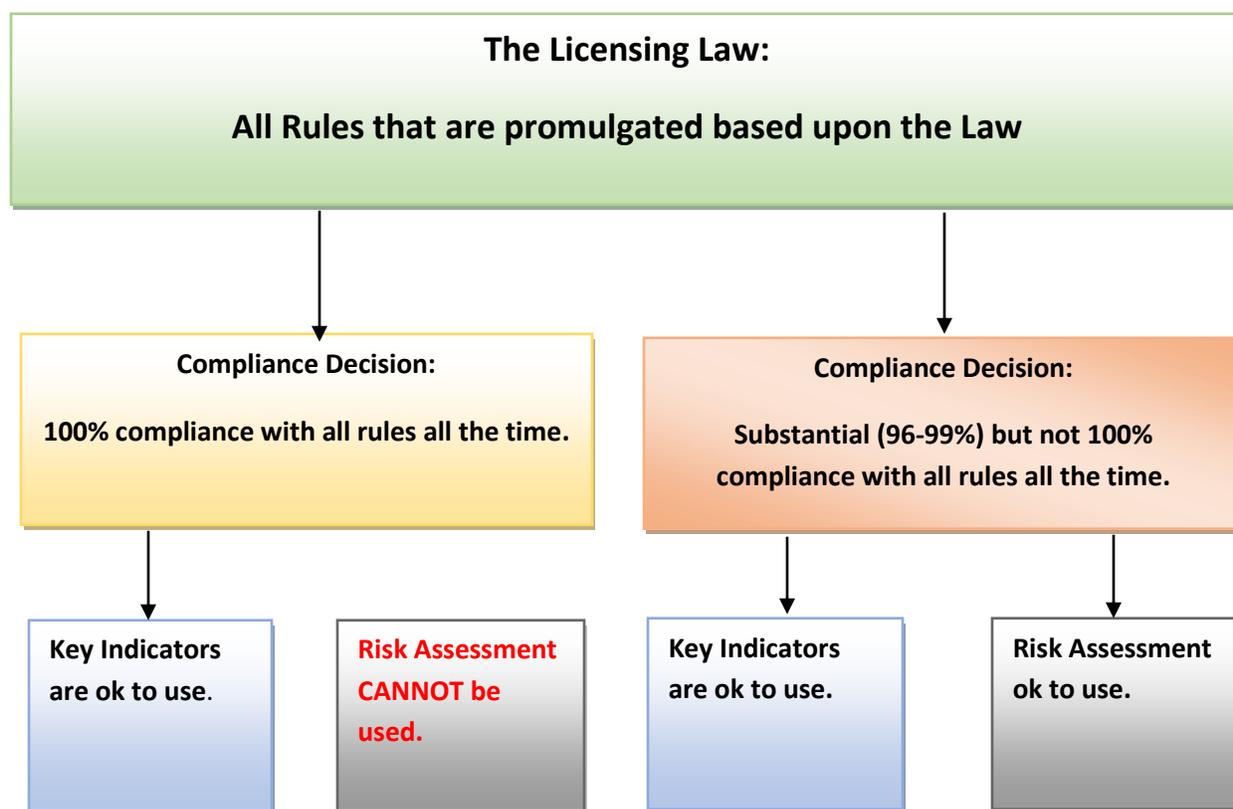
Licensing Rules, Compliance Reviews, Differential Monitoring, Abbreviated Tools, Risk Assessment, and Key Indicators



Fiene (2014). DMLMA/ECPQIM⁴©, RIKI.

Figure 4

When Key Indicators and Risk Assessments Can Be Used



Fiene (2014)