DIFFERENTIAL MONITORING LOGIC MODEL (DMLM©): A NEW EARLY CHILDHOOD PROGRAM QUALITY INDICATOR MODEL (ECPQIM[4]©) FOR EARLY CARE AND EDUCATION REGULATORY AGENCIES

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ABSTRACT

A new Early Childhood Program Quality Indicator Model (ECCPQIM[4]©) is described which utilizes targeted program monitoring (Differential Monitoring) via two licensing methodologies: Key Indicators and Risk Assessments. The theoretical & conceptual framework as well as a logic model are presented along with a scoring protocol that can be utilized to compare state and national organizations on how they are designing and implementing their program monitoring systems. A state plan is presented as well as results from five (5) states (Georgia, Kansas, Illinois, Colorado, and New York) and a national organization (Office of Head Start). The five states and national organization are then compared using the Differential Monitoring Scoring Protocol (DMSP©). The Head Start program monitoring system scored a perfect 10 out of 10 in utilizing the DMSP©.

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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<u>***Introduction***</u>

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).
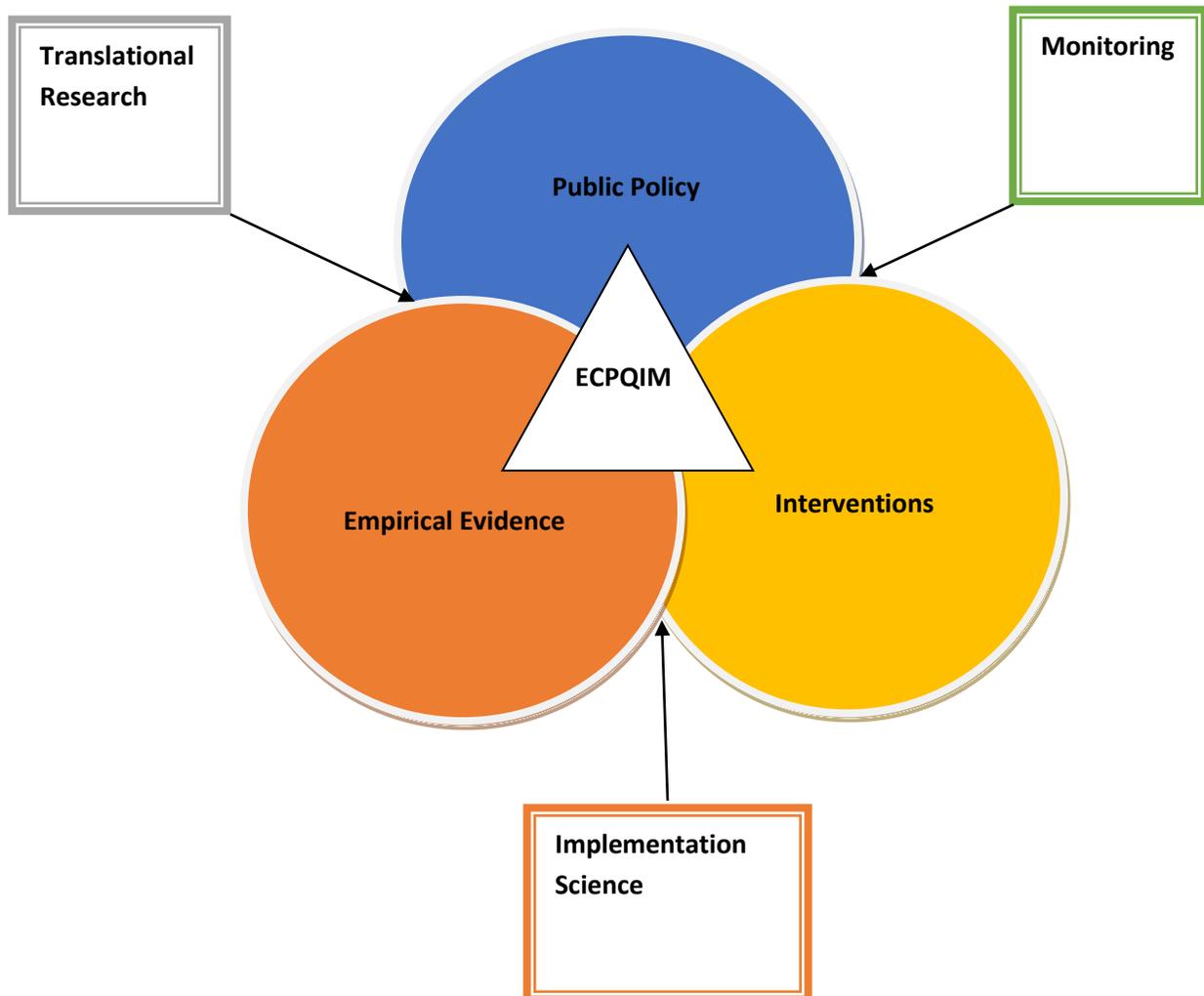
The DMLM© can be used by state agencies (child care, child residential, adult residential (just replace Child Outcomes with Adult Outcomes)), Federal agencies (Head Start, child care, Pre-K), and large provider organizations where an economy of scale is required. This model can be used with state as 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

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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.

Figure 1

The Theoretical Underpinnings for ECPQIM[4]: Early Childhood Program Quality Indicator Model©

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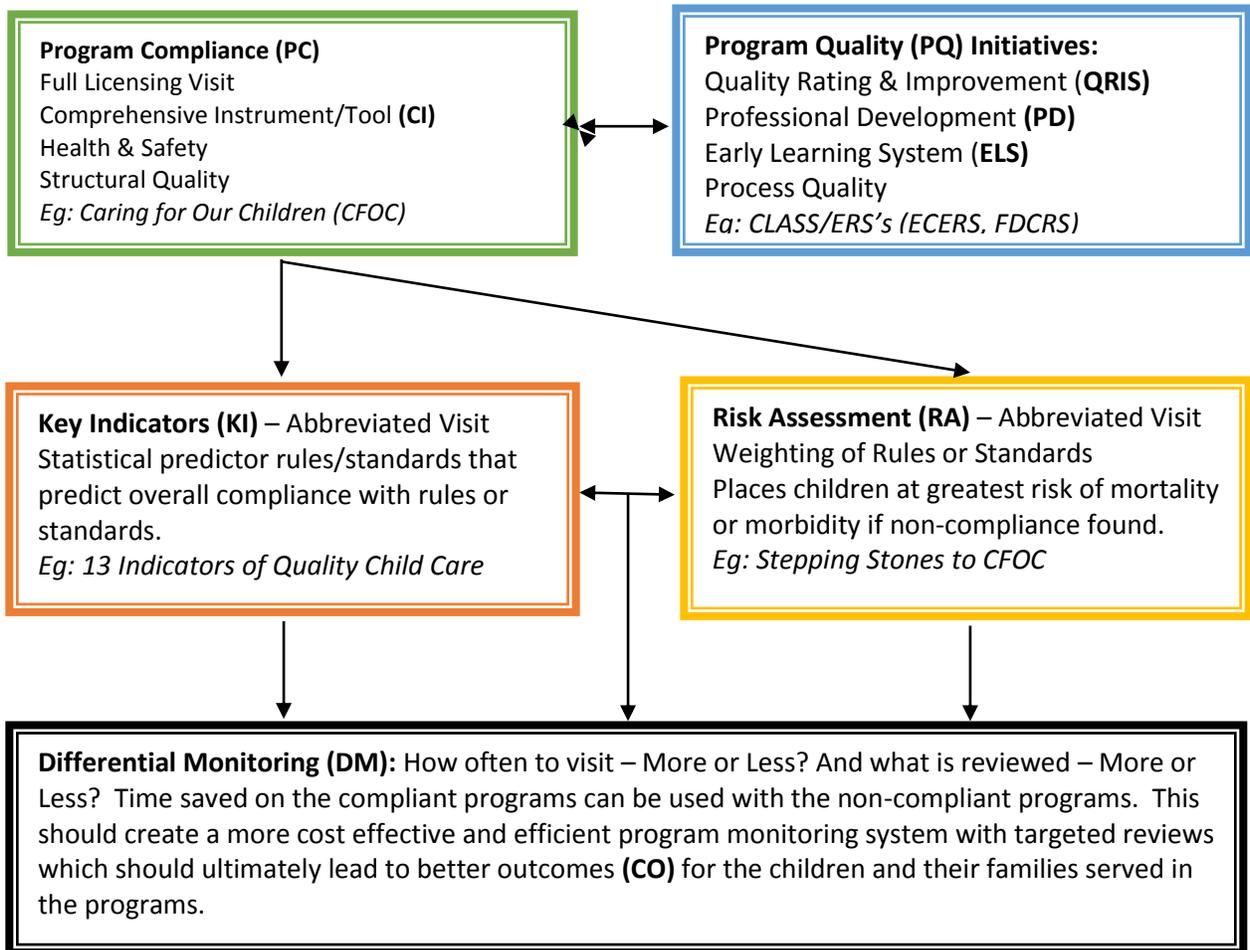
The DMLM© provides a cross-cutting methodology that can be used in all early care and education delivery systems as well as in other human services. In the past many of these monitoring systems have functioned in silos. The DMLM© integrates all these various

monitoring systems together so that the overall monitoring system can be validated as being cost effective and efficient.

Figure 2

Early Childhood Program Quality Indicator Model (ECPQIM[4]©):
Differential Monitoring Logic Model (DMLM©)
Comprehensive National Example

Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument/Tool **(CI)**
Health & Safety
Structural Quality
Eg: Caring for Our Children (CFOC)

Program Quality (PQ) Initiatives:
Quality Rating & Improvement (**QRIS)**
Professional Development **(PD)**
Early Learning System (**ELS)**
Process Quality
Ea: CLASS/ERS's (ECERS, FDCRS)

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that predict overall compliance with rules or standards.
Eg: 13 Indicators of Quality Child Care

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality or morbidity if non-compliance found.
Eg: Stepping Stones to CFOC

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes **(CO)** for the children and their families served in the programs.

<u>*Methodology*</u>

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 ECPQIM[4]©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 ECPQIM[4]. 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 ECPQIM[4] 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 a 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.

Figure 3

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

All Licensing Rules – Full Compliance Reviews

Differential Monitoring

How Often to Visit?   What is Reviewed?

Frequency

Abbreviated Tool

More Often

Less Often

Risk Assessment

Weights

Key Indicators

Predictors
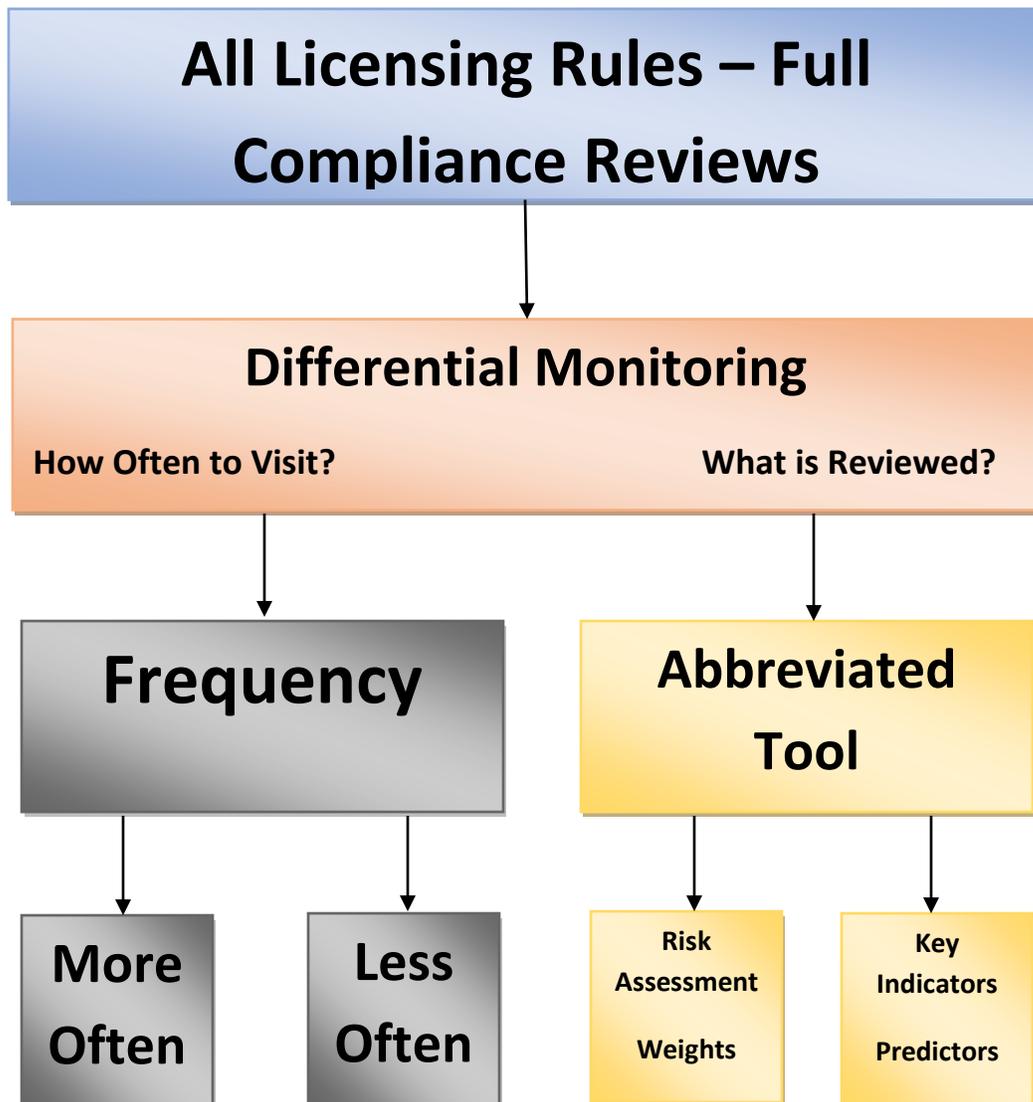
Figure 4

When Key Indicators and Risk Assessments Can Be Used

The Licensing Law:

All Rules that are promulgated based upon the Law

Compliance Decision:

100% compliance with all rules all the time.

Compliance Decision:

Substantial (96-99%) but not 100% compliance with all rules all the time.

Key Indicators are ok to use.

Risk Assessment CANNOT be used.

Key Indicators are ok to use.

Risk Assessment ok to use.

Table 1: Differential Monitoring Scoring Protocol (DMSP)©

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.

<u>*Results*</u>

I have written extensively about an Early Childhood Program Quality Indicator Model (ECPQIM©) and its latest iteration presented as a logic model: Differential Monitoring Logic Model (DMLM©). Several states and Head Start have used the model in order to re-align their program monitoring systems. This paper will present the results of those new program monitoring systems through the lenses of the ECPQIM©/DMLM© logic model display. Each particular approach used various components of the overall comprehensive national model and I have highlighted those sections by connecting arrows**.**

The interested reader should obtain a copy of the Office of Child Care's *Licensing Brief on Differential Monitoring, Risk Assessment, and Key Indicators* published by the National Center on Child Care Quality Improvements which gives additional details regarding these approaches and methodologies as well as other state examples. Please go to the following URL website: (https://childcareta.acf.hhs.gov/sites/default/files/1408_differential_monitoring_final_1.pdf). In fact, this paper builds upon that excellent *Licensing Brief*.

Let's start with Figure 1 which provides the Comprehensive National Example that depicts all the possible interconnections and gives national examples from the research literature. As one will see, it is possible for a national organization or a state agency to select the various components from the model based upon what is available in their particular organization or state. All do have the program compliance/licensing component but not all have fully functional program quality initiatives or do not have the data to draw from the program quality initiatives.

The next level of components are the key indicator and risk assessment approaches or methodologies which organizations or state agencies can use alone or in tandem. One limitation in the key indicator methodology is not to use it with program initiatives if the data are not severely skewed in their data distribution as is the case with licensing data.

The last component is the resulting differential monitoring approach based upon the results from using the key indicator and risk assessment methodologies either alone or in tandem. This is the ultimate revision of the program monitoring system in which how often and what is reviewed are answered.

All the components are highlighted in Figure 5 because all are possibilities to be used by a national or state agency. The examples in Figure 5 are drawn from the national research literature so *Caring for Our Children* is the example for Program Compliance, Licensing, Health & Safety Comprehensive Instrument. The following examples in Figures 6-11 will show some differences in how national and state agencies have developed their respective differential monitoring systems. The tables (Tables 1-3) at the end of this paper (page 21-22) explains the scoring protocol. Also see the end of the paper for an explanation of Notes a,b,c (page 22).

**Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©) Comprehensive National
Scoring Protocol Example (Maximum of 10 Points)
Figure 5**
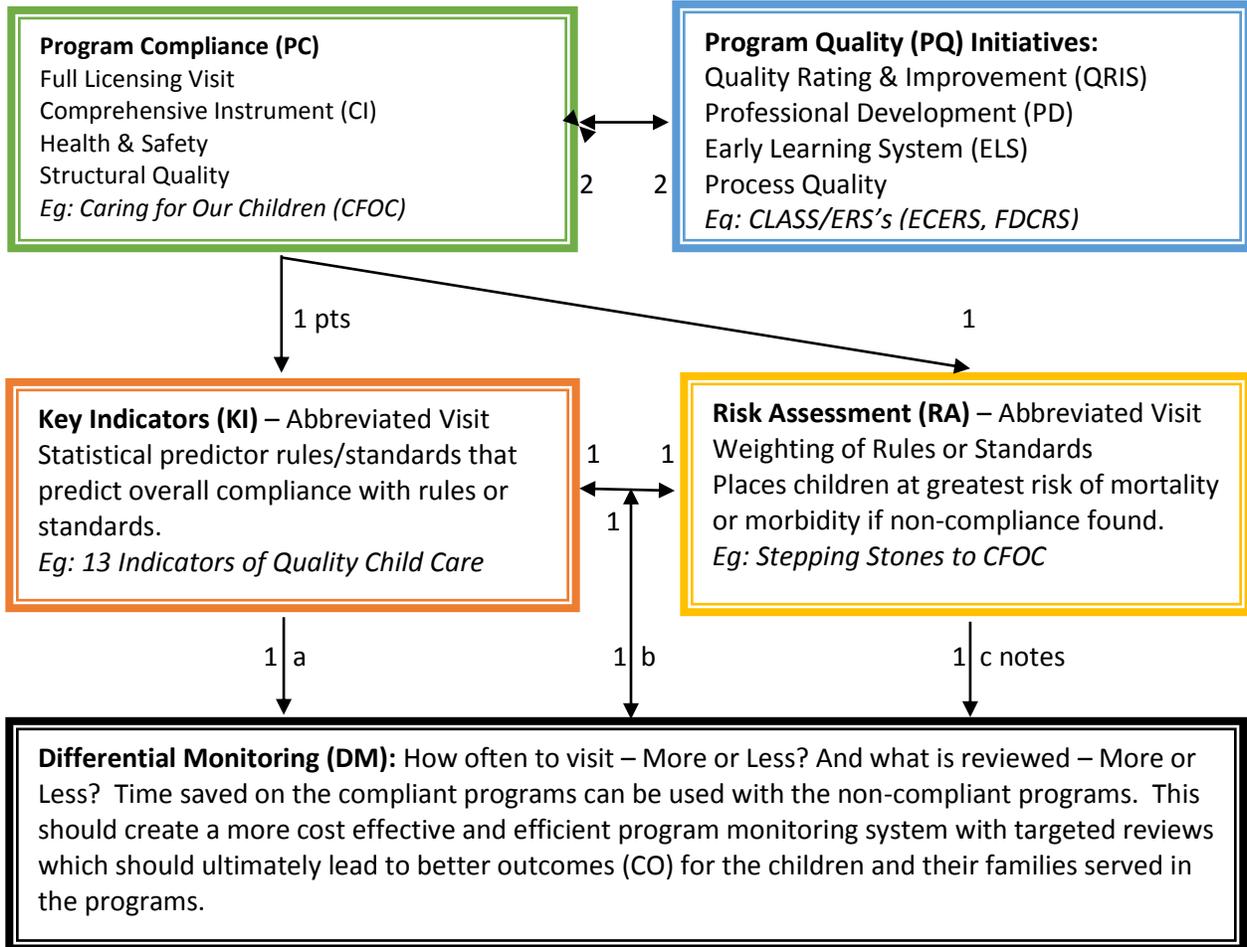
Figure 6 provides an example from New York where the state agency is attempting to restructure

their early care and education program monitoring system to have a better balance between

licensing and key program quality indicators. The plan is to have licensing staff collect data

from both areas which means a need to save time in the licensing reviews via key indicators and

to only identify indicators of quality through a risk assessment approach. The results from these

two methodologies will then be combined into a Quality Indicators Instrument to be used by

licensing staff in their annual reviews.

(ECPQIM4©)(DMLM©): New York Example (NY)
Figure 6

Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument (CI)
Health & Safety
Structural Quality
Eg: New York Licensing Rules

Program Quality (PQ) Initiatives:
Quality Rating & Improvement (QRIS)
Professional Development (PD)
Early Learning System (ELS)
Process Quality
Ea: CLASS/ERS's (ECERS, FDCRS)

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that
predict overall compliance with rules or
standards.
Eg: New York Key Indicators

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality
or morbidity if non-compliance found.
Eg: Selected Quality Indicators

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.

Figure 7 provides an example from Georgia in which the driving methodology

is a risk assessment core rule review system that results in a differential monitoring system called

the Annual Compliance Determination Worksheet (ACDW) approach. Key indicators are not

used directly but were used as part of the risk assessment core rule development. Please note

how the relationship amongst the various components is different from the NYQI approach

delineated in Figure 6. There is a link to their program quality initiatives which proved very

significant in the validation studies performed on their Core Rule differential monitoring system.

(ECPQIM4©)(DMLM©): Georgia Example (GA)
Figure 7
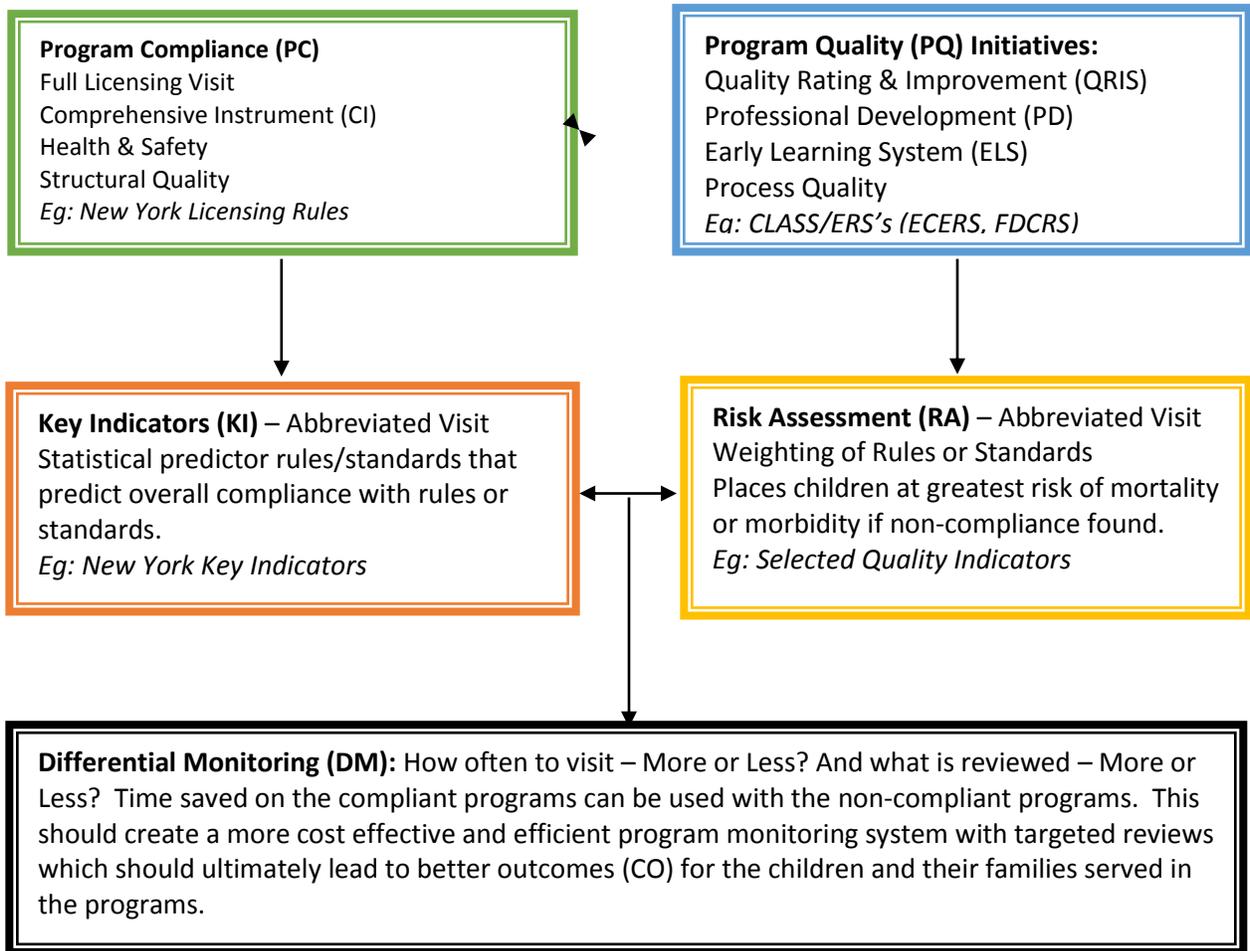
Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument (CI)
Health & Safety
Structural Quality
Eg: Georgia Licensing Rules

Program Quality (PQ) Initiatives:
Quality Rating & Improvement (QRIS)
Professional Development (PD)
Early Learning System (ELS)
Process Quality
Eg: ERS's (ECERS, FDCRS)

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that
predict overall compliance with rules or
standards.
Eg: 13 Indicators of Quality Child Care

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality
or morbidity if non-compliance found.
Eg: Core Rules

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or
Less? Time saved on the compliant programs can be used with the non-compliant programs. This
should create a more cost effective and efficient program monitoring system with targeted reviews
which should ultimately lead to better outcomes (CO) for the children and their families served in
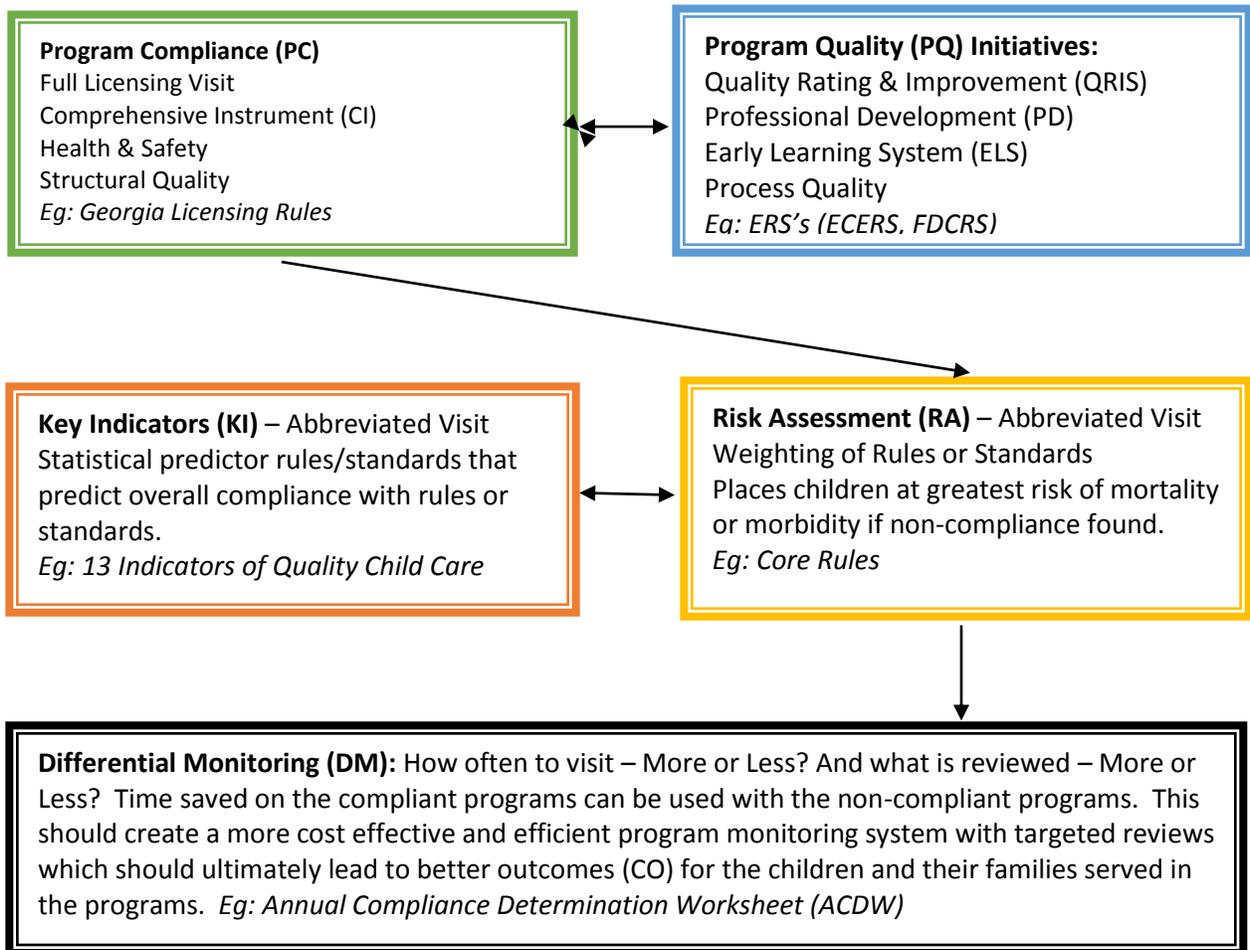the programs. *Eg: Annual Compliance Determination Worksheet (ACDW)*

Figure 8 presents a very different approach from the previous two approaches. In Kansas's case,

the state agency was only interested in developing a key indicator approach and was not

interested in risk assessment nor had the capability to tie data together from their program quality

initiatives. This is noted by the arrow connections and yellow highlighting which is more minimal in this figure. As one can see, this still is a viable option for developing a differential monitoring approach.

(ECPQIM4©)(DMLM©): Kansas Example (KS)
Figure 8

Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument (CI)
Health & Safety
Structural Quality
Eg: Kansas Licensing Rules

Program Quality (PQ) Initiatives:
Quality Rating & Improvement (QRIS)
Professional Development (PD)
Early Learning System (ELS)
Process Quality

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that predict overall compliance with rules or standards.
Eg: Kansas Key Indicators

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality or morbidity if non-compliance found.

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
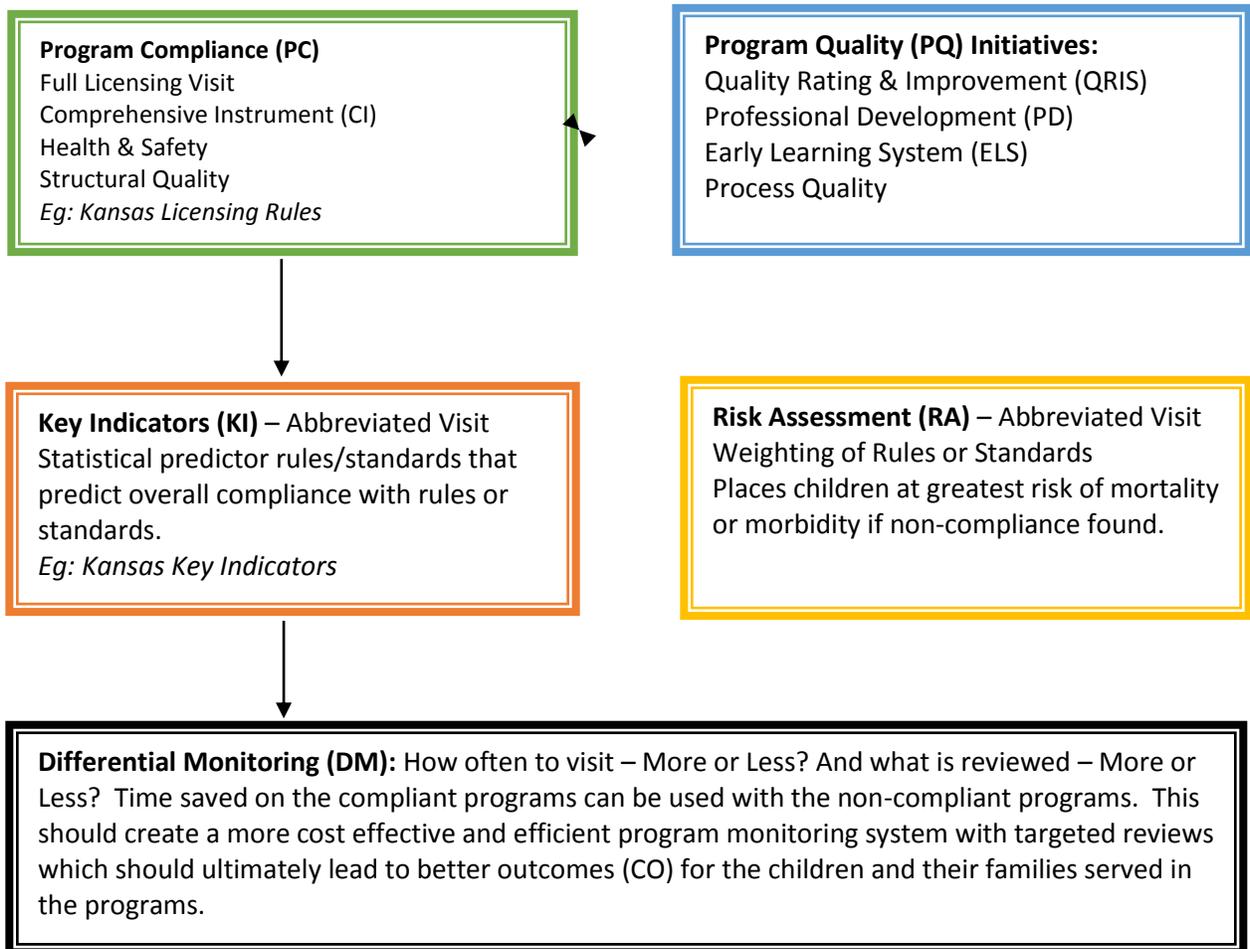
Figure 9 depicts the use of both key indicator and risk assessment methodologies with their licensing system but no data interaction with their program quality initiatives. It is proposed that

both methodologies will be used together in future licensing reviews of programs which will

constitute their differential monitoring system approach.

(ECPQIM4©)(DMLM©): Illinois Example (IL)
Figure 9

Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument (CI)
Health & Safety
Structural Quality
Eg: Illinois Licensing Rules

Program Quality (PQ) Initiatives:
Quality Rating & Improvement (QRIS)
Professional Development (PD)
Early Learning System (ELS)
Process Quality

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that
predict overall compliance with rules or
standards.
Eg: Illinois Key Indicators

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality
or morbidity if non-compliance found.
Eg: Illinois Weighting Consensus

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or
Less? Time saved on the compliant programs can be used with the non-compliant programs. This
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which should ultimately lead to better outcomes (CO) for the children and their families served in
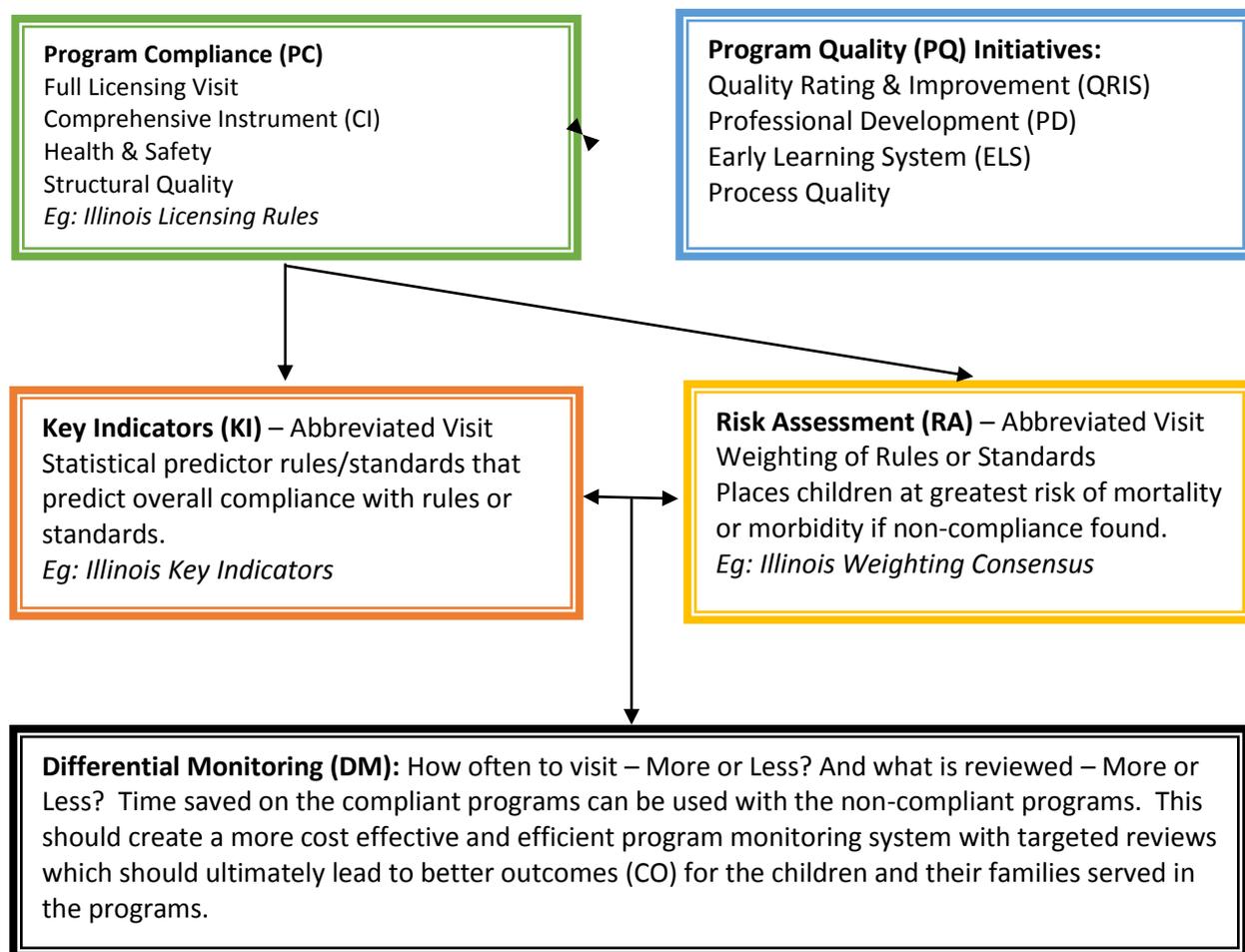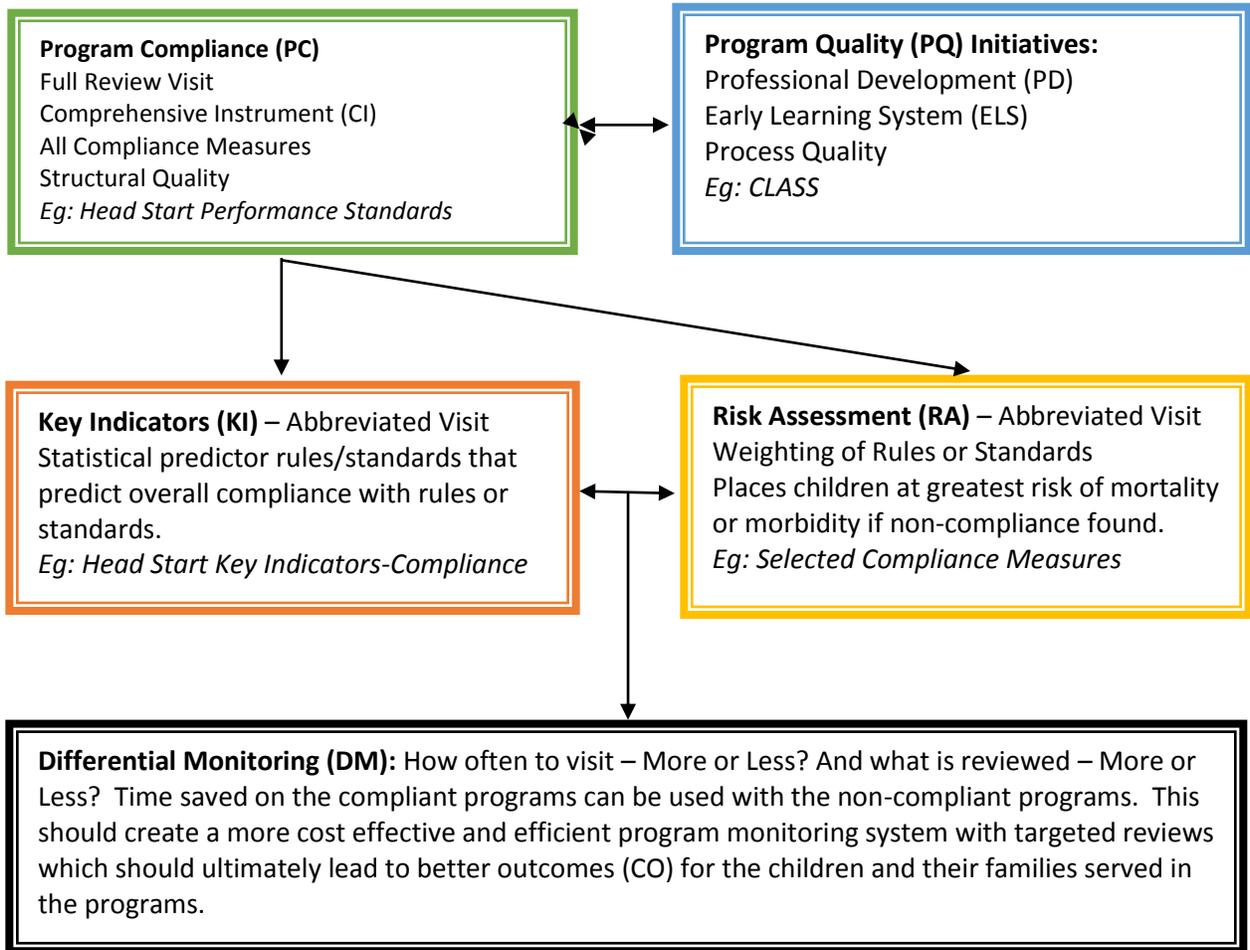the programs.

Figure 10 depicts the new aligned differential monitoring system being employed in Head Start.

Head Start has a very comprehensive system that employs various aspects from all the

components in their system. The Head Start Performance Standards are very comprehensive,

CLASS is used as a major process quality measure and both a key indicator (Head Start Key

Indicator – Compliance (HSKI-C)) and risk assessment (Selected Compliance Measures) are utilized in their program monitoring system. The Head Start new Aligned Program Monitoring system comes closest to the comprehensive national model.

(ECPQIM4©)(DMLM©): Head Start Example (HS)
Figure 10

<table>
<tr>
<td>

Program Compliance (PC)
Full Review Visit
Comprehensive Instrument (CI)
All Compliance Measures
Structural Quality
Eg: Head Start Performance Standards

</td>
<td>

Program Quality (PQ) Initiatives:
Professional Development (PD)
Early Learning System (ELS)
Process Quality
Eg: CLASS

</td>
</tr>
<tr>
<td>

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that predict overall compliance with rules or standards.
Eg: Head Start Key Indicators-Compliance

</td>
<td>

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality or morbidity if non-compliance found.
Eg: Selected Compliance Measures

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</table>

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
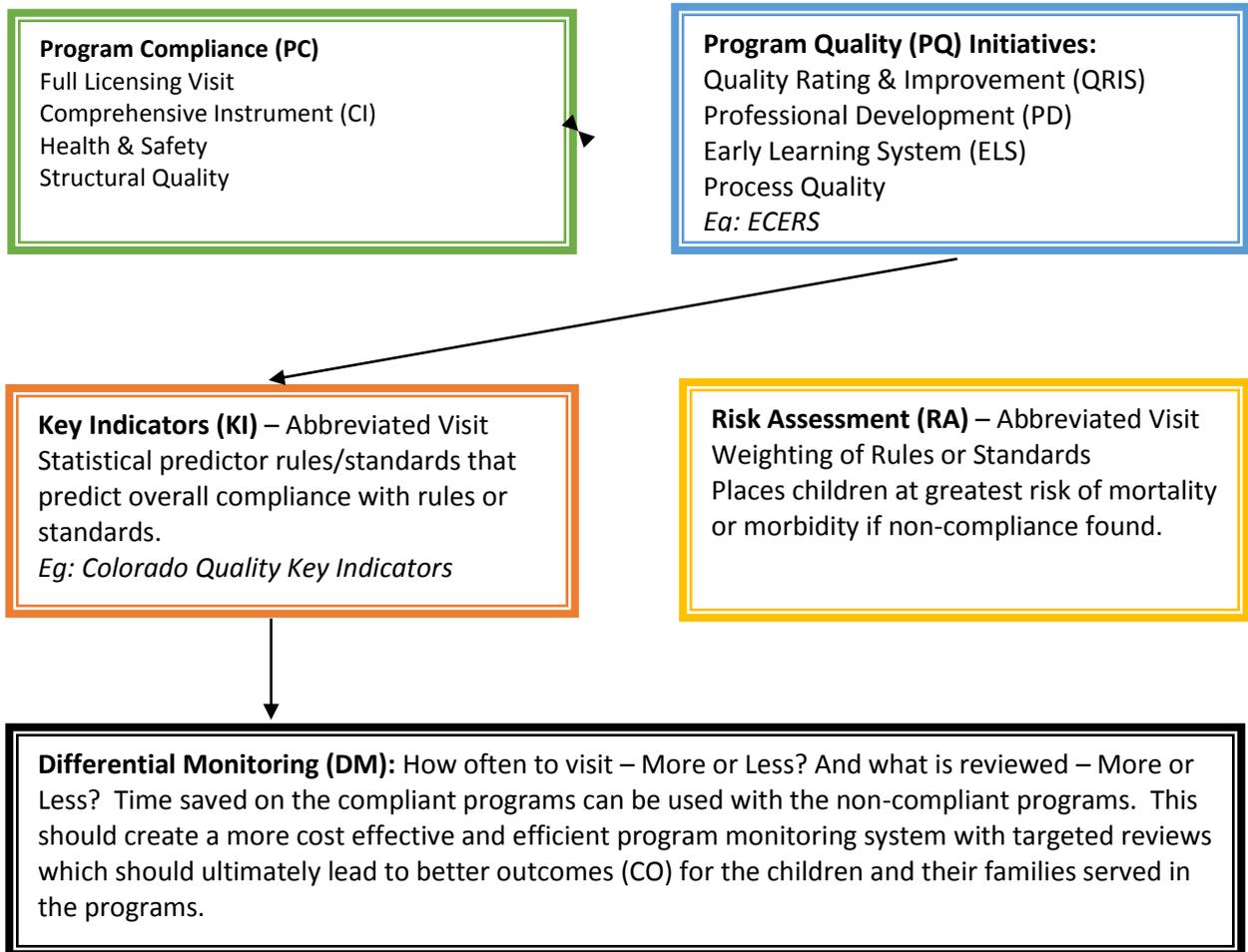
In Figure 11 a very different scenario played out in the state of Colorado in which key indicators were developed for their QRIS system rather than for their licensing system. As mentioned earlier, when applying the key indicator methodology to Quality Initiatives one needs to be very

cautious if the data distribution is not exceptionally skewed as is the case with licensing data.

Some of the data were sufficiently skewed to be able to be used in generating quality key

indicators there were limitations noted.

(ECPQIM4©)(DMLM©): Colorado Example (CO)
Figure 11

Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument (CI)
Health & Safety
Structural Quality

Program Quality (PQ) Initiatives:
Quality Rating & Improvement (QRIS)
Professional Development (PD)
Early Learning System (ELS)
Process Quality
Ea: ECERS

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that predict overall compliance with rules or standards.
Eg: Colorado Quality Key Indicators

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality or morbidity if non-compliance found.

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.

<u>Conclusion</u>

This paper presents the latest examples of national and state agencies differential monitoring approaches. It clearly demonstrates that there are many different approaches to developing and implementing differential monitoring. A key research question for the future as more states utilize the different approaches is to study if one approach is better than the next or a combination works better than most. From my 40+ years of experience as a researcher and state policy analyst I would suggest that a more comprehensive approach that employs the full menu of program quality initiatives similar to the Head Start or the NYQI approaches will be most effective.

As mentioned in the introduction of this paper in describing the Comprehensive National Example of the DMLM© Model the following three tables (Tables 1-3) present a Differential Monitoring Scoring Protocol (DMSP©) that can potentially be used to compare states on how in depth their differential monitoring system is. Table 1 describes the DMSP© in narrative terms delineating the various systems that need to be in place in order to get a particular score. A score of 0 means no systems are in place or do not intersect while a score of 10 means that all of the systems are in place and intersect or are linked. Table 2 gives the points assigned to the specific systems that are part of a differential monitoring system. And Table 3 gives the actual points assigned to the state & national examples that have been presented in this paper for ***New York (NY), Georgia (GA), Head Start (HS), Kansas (KS), Illinois (IL), and Colorado (CO)***. The total points assigned to the comprehensive model are also provided as a point of context.

There are a couple of important things to note about the DMSP© in Table 2, such as: if Key

Indicators (KI) and Risk Assessment (RA) are linked, it negates KI and RA being scored

separately. If KI and RA are developed separately, it is very improbable that they will not be

linked but that is always a possibility, so it is listed as so. Linking Program

Compliance/Licensing (PC) and Program Quality (PQ) Initiatives is a highly desirable event and

is assigned a high score (4 points). Linking KI and RA is also considered a highly desirable

event and is assigned a high score (4 points).

Table 1: Differential Monitoring Scoring Protocol (DMSP)©

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.**

Table 2: Differential Monitoring Scoring Protocol (DMSP)© Point Assignment

Score	*Systems Present and Point Assignment*
0	**No systems in place.**
2	**(KI (1)) & (KI -> DM (1)) or ((RA (1)) & (RA -> DM (1))**
4	**(PC + PQ (4)) or (KI (1) & (KI -> DM (1)) & (RA (1) & (RA -> DM (1))**
6	**(KI + RA -> DM (4)) & (KI (1)) & (RA (1))**
8	**(KI (2) & RA (2)) & (PC + PQ (4)).**
10	**(KI + RA -> DM (4)) & (KI (1)) & (RA (1)) & (PC + PQ (4))**

KI (Key Indicators); RA (Risk Assessment); PC (Program Compliance/Licensing); PQ (Program Quality Initiatives

Table 3: DMLM© SCORING PROTOCOL WITH STATE EXAMPLES

SYSTEMS (pts)	MODEL	GA	NY	HS	IL	KS	CO
KI (1)	1	-	1	1	1	1	1
RA (1)	1	1	1	1	1	-	-
KI + RA -> DM (4) KI + RA (2)	4	2	4	4	4	-	-
PC + PQ (4)	4	4	-	4	-	-	-
KI -> DM (1)	-	-	-	-	-	1	1
RA -> DM (1)	-	1	-	-	-	-	-
TOTAL (10)	10	8	6	10	6	2	2

GA (Georgia); NY (New York); HS (Head Start); IL (Illinois), KS (Kansas); CO (Colorado)

Notes a, b, c: The arrows going from Key Indicators (KI) and Risk Assessment (RA) to Differential Monitoring (DM) can be configured in the following ways: only KI (Kansas); only RA (don't have an example of this as of this writing) or a combination of KI and RA (Illinois) but this configuration could mean all of the KI and RA rules which would be more rules than if only KI or RA rules were selected or only those rules that overlap (KI+RA) which would be a much reduced number of rules. Or a different configuration determined by the state agency.

REFERENCES

Fiene (2012/2013). Early childhood program quality indicator model (ECPQIM[4]©): 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.

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