Early Childhood Program Quality Indicator Model (ECPQIM4©)/Differential Monitoring Logic Model (DMLM©) Comprehensive National and State Examples of Its Application

Richard Fiene, Ph.D.

December 2014

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 in highlight <mark>yellow</mark> and connected by an arrow.

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 1 because all are possibilities to be used by a national or state agency. The examples in Figure 1 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 2-7 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 10) explains the scoring protocol. Also see the end of the paper for an explanation of Notes a,b,c (page 9).

**Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
Comprehensive National Example (Maximum of 10 Points)
Figure 1**

Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument (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
Eq: CLASS/ERS's (ECERS, FDCRS)

2   2

1 pts   1

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

1   1

1

1 a   1 b   1 c notes

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.
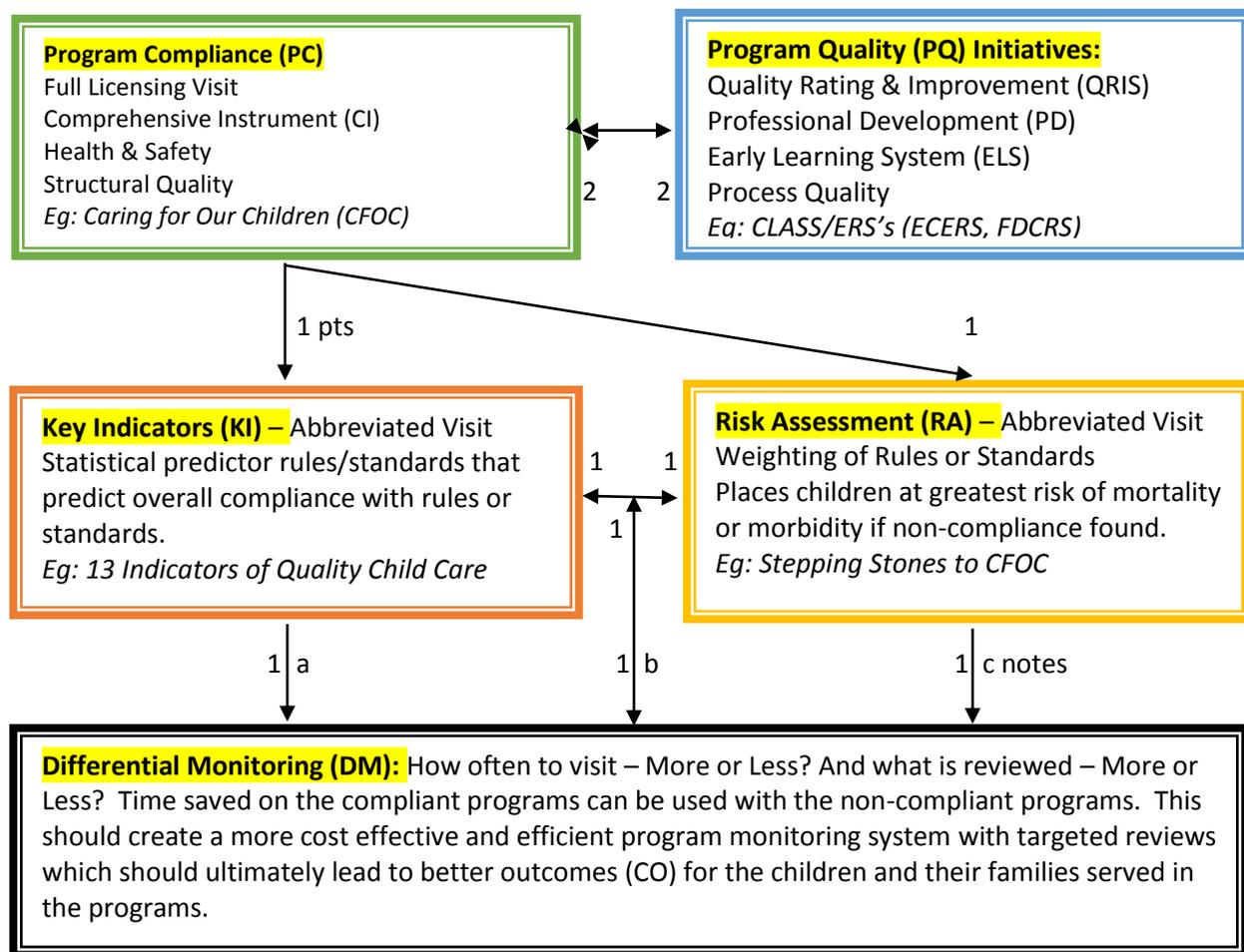
Figure 2 provides an example from New York where the state agency is attempting to restructure their early care and education program monitoring system to have a better balance between licensing and key program quality indicators. The plan is to have licensing staff collect data from both areas which 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.

Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
NYQI Example (NY)
Figure 2

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.
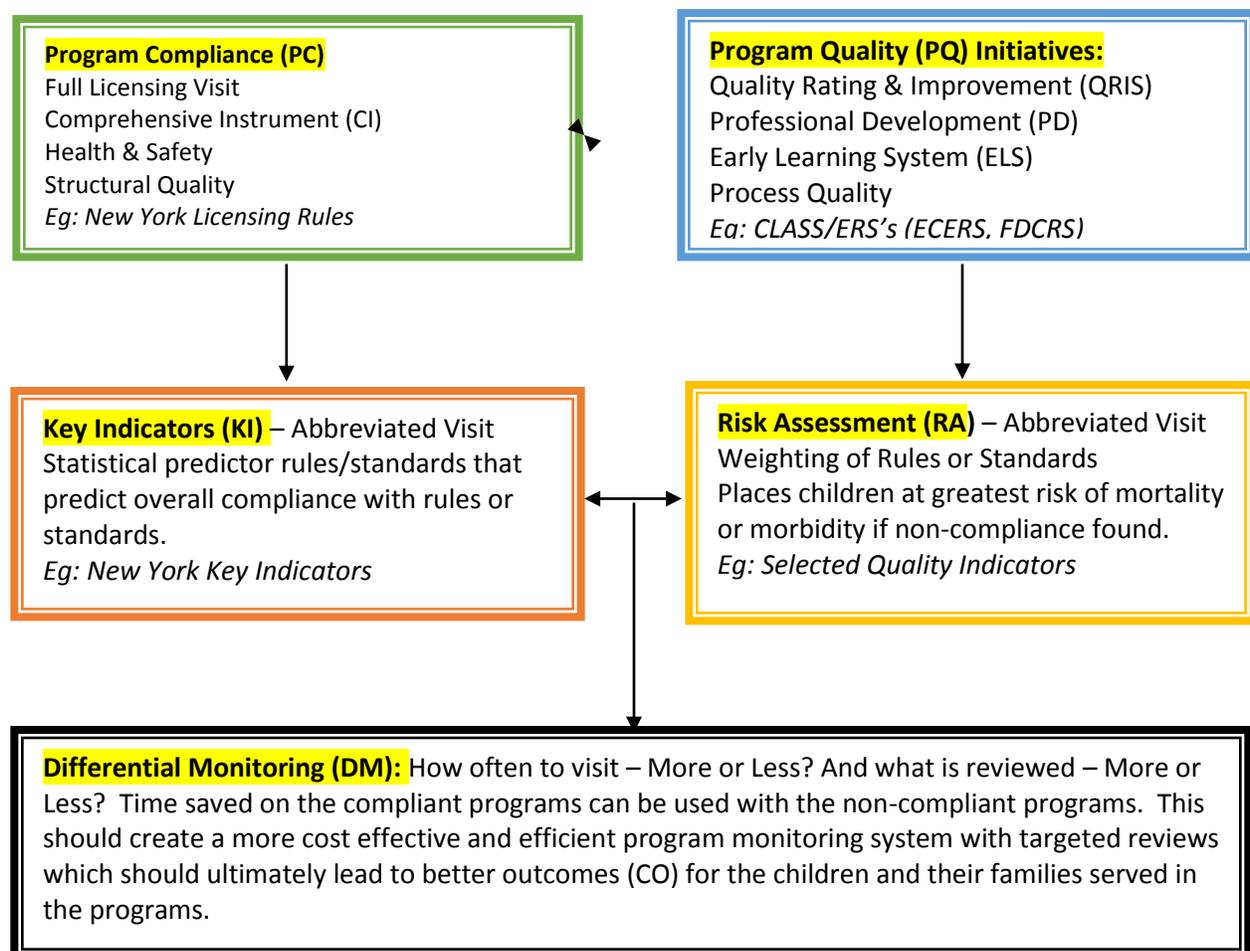
Figure 3 provides an example from Georgia in which the driving methodology is a risk assessment core rule review system that results in a differential monitoring system called the Annual Compliance Determination Worksheet (ACDW) approach. Key indicators are not used directly but were used as part of the risk assessment core rule development. Please note how the relationship amongst the various components is different from the NYQI approach delineated in Figure 2. 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.

Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
Georgia Example (GA)
Figure 3

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
Ea: 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)*
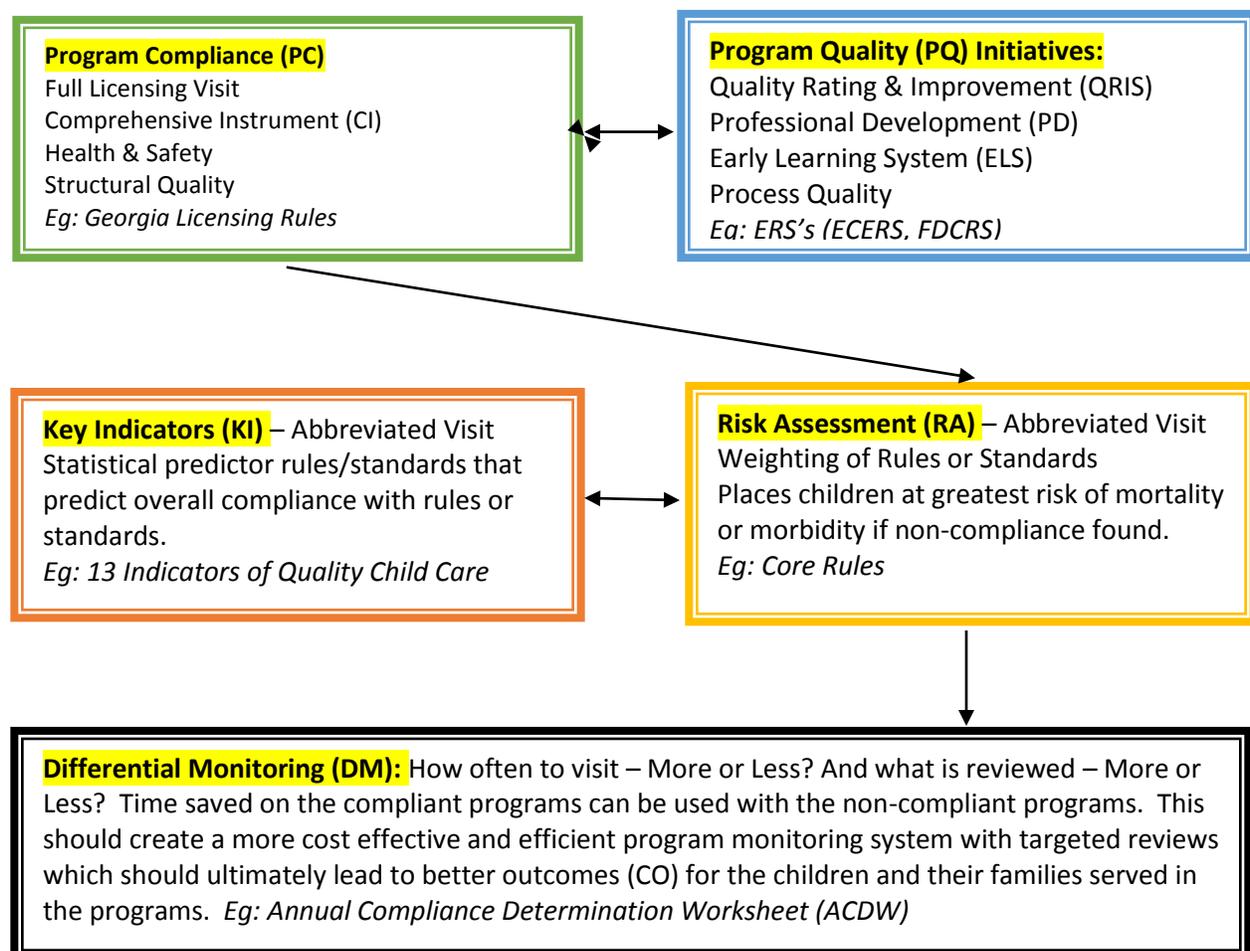
Figure 4 presents a very different approach from the previous two approaches. In Kansas's case, the state agency was only interested in developing a key indicator approach and was not interested in risk assessment nor had the capability to tie data together from their program quality initiatives. This 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.

Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
Kansas Example (KS)
Figure 4

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.
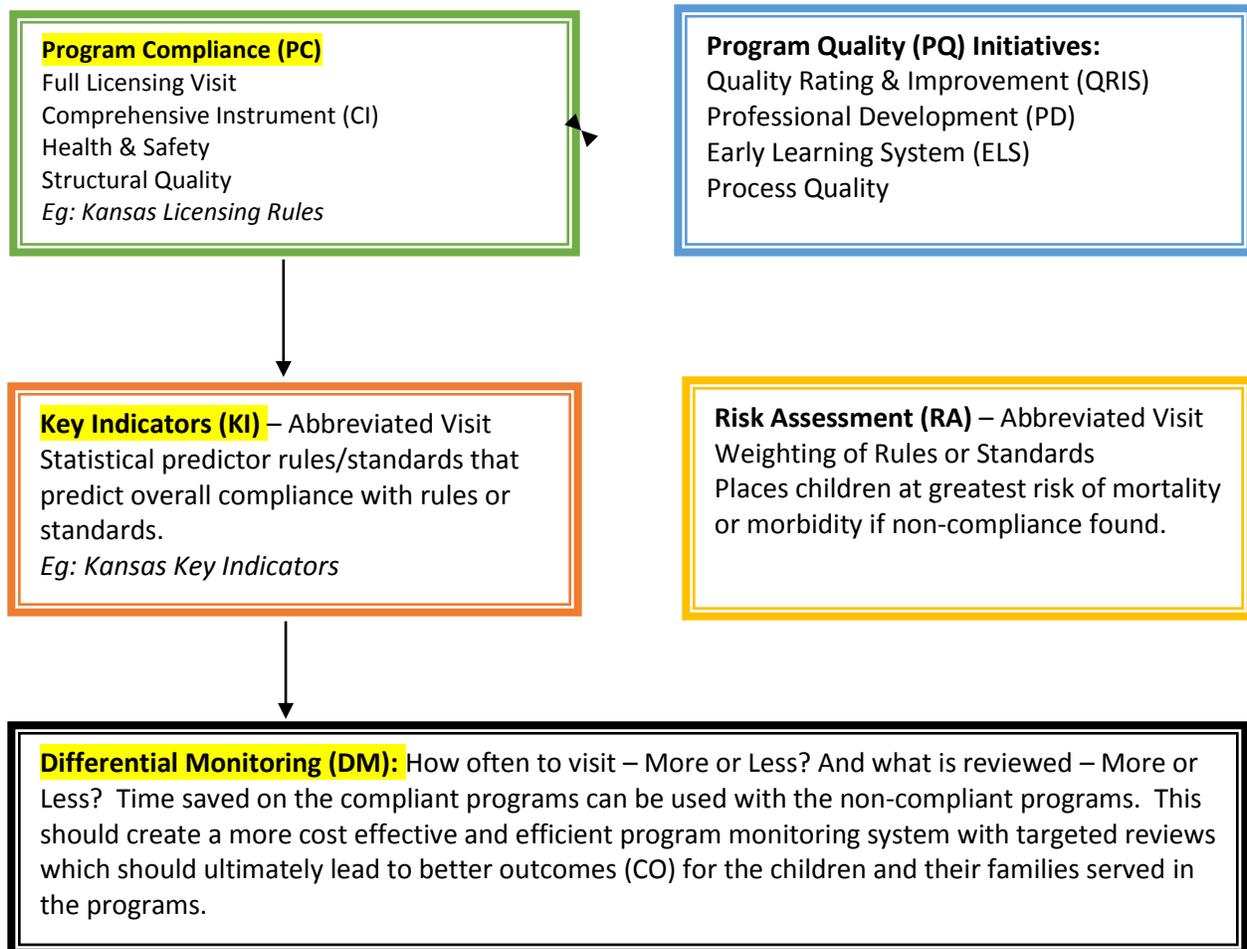
Figure 5 depicts the use of both key indicator and risk assessment methodologies with their licensing system but no data interaction with their program quality initiatives. It is proposed that both methodologies will be used together in future licensing reviews of programs which will constitute their differential monitoring system approach.

Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
Illinois Example (IL)
Figure 5

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 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.
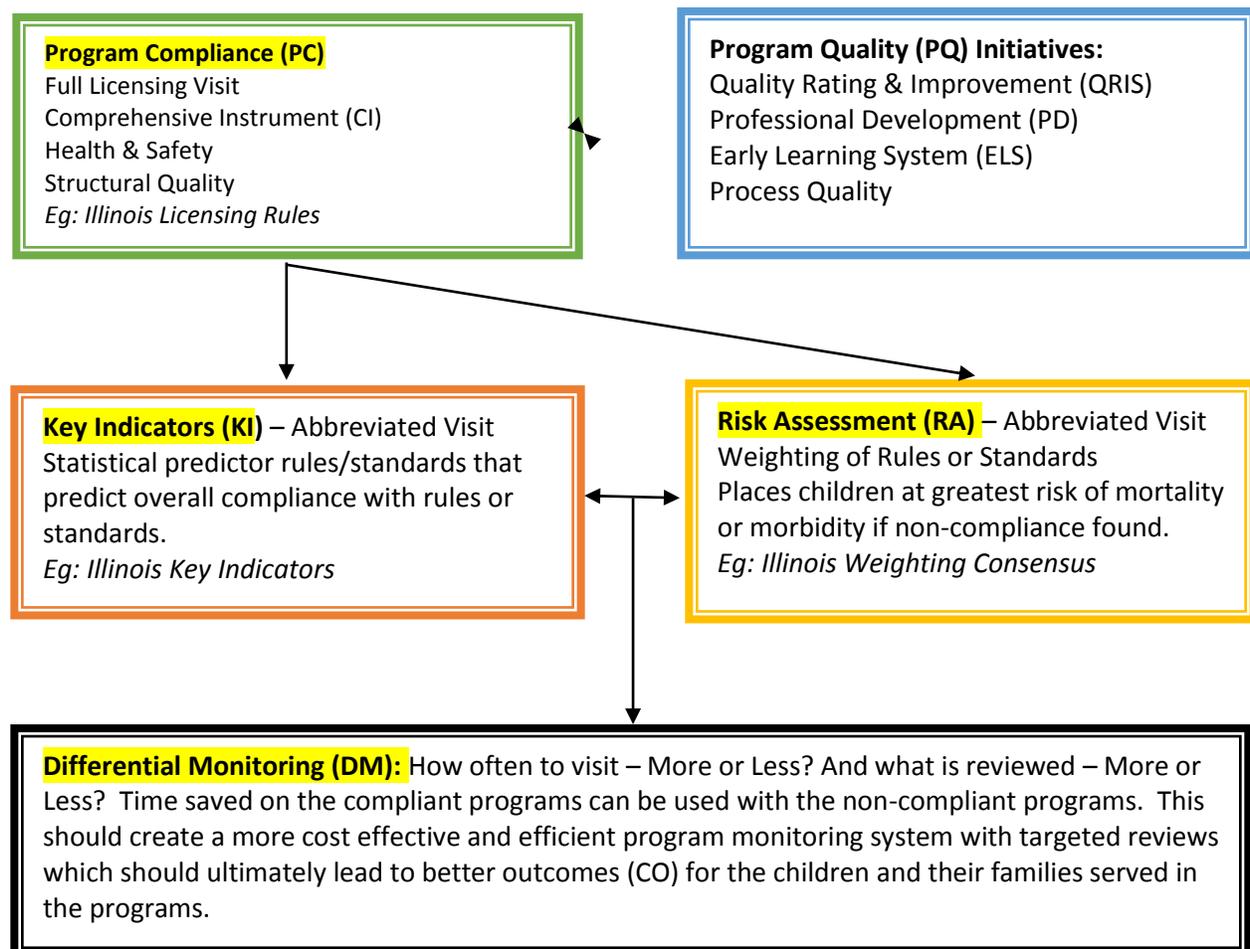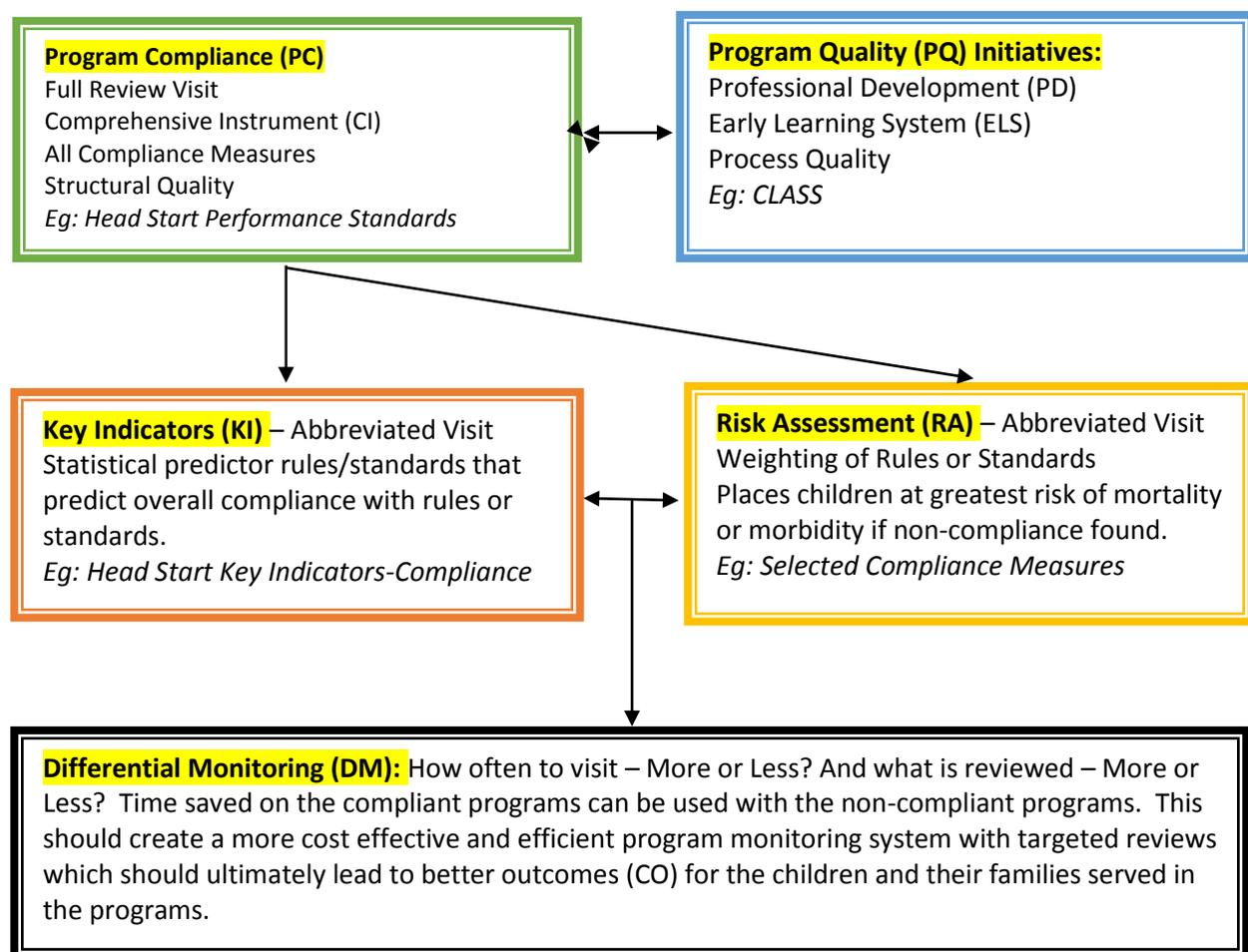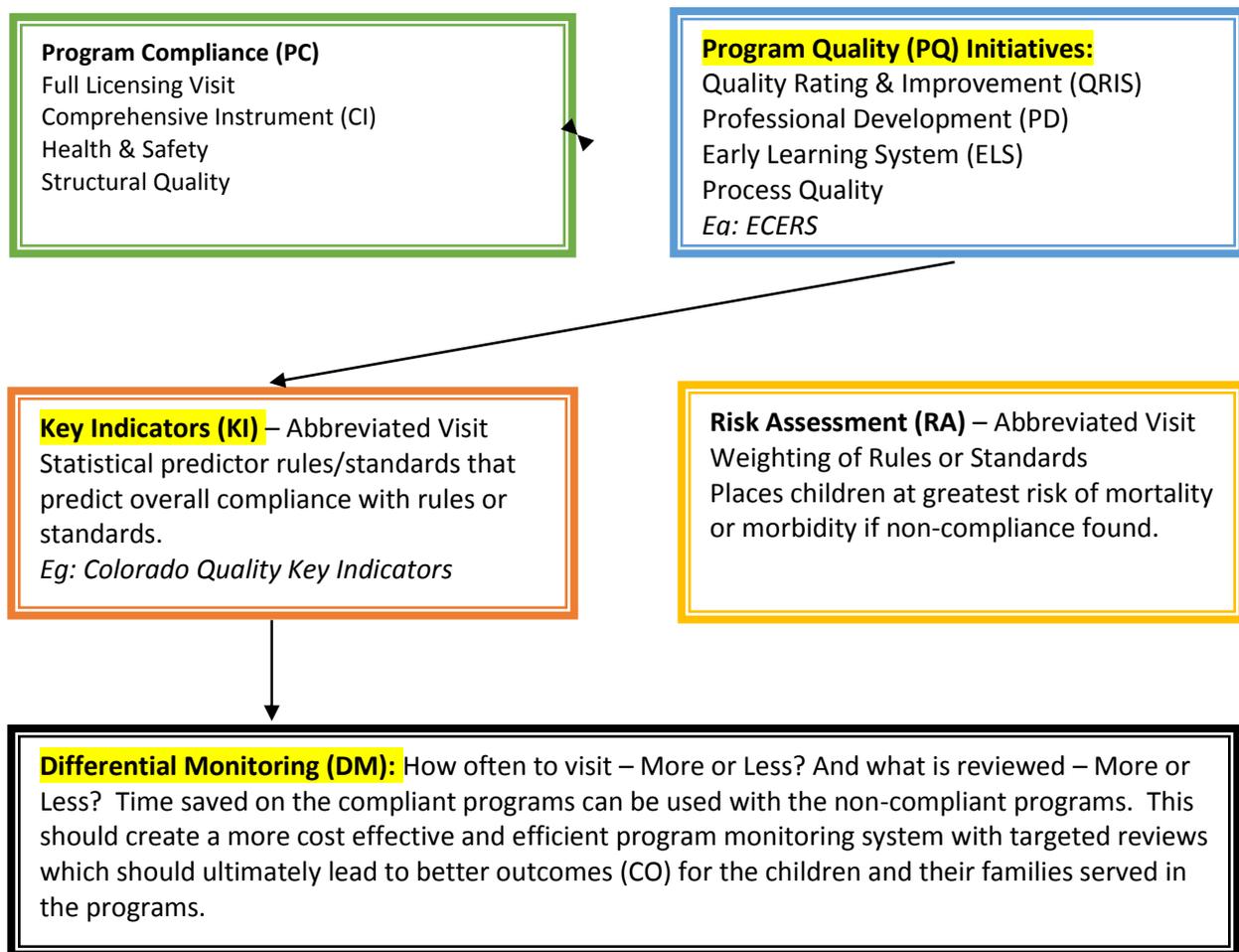
Figure 6 depicts the new aligned differential monitoring system being employed in Head Start. Head Start has a very comprehensive system that employs various aspects from all the components in their system. The Head Start Performance Standards are very comprehensive, CLASS is used as a major process 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.

Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
Head Start (HS)
Figure 6

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

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

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

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

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 7 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.

Early Childhood Program Quality Indicator Model (ECPQIM4©):
Differential Monitoring Logic Model (DMLM©)(Fiene, 2014)
Colorado Example (CO)
Figure 7

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.

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. This is depicted by those cells being blocked out in red. 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).

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.

Table 1: Differential Monitoring Scoring Protocol (DMSP)© (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.

Table 2: Differential Monitoring Scoring Protocol (DMSP)© Point Assignment (Fiene, 2014)

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)