THE INTERSECTION OF TRANSLATIONAL RESEARCH AND IMPLEMENTATION SCIENCE: AN EARLY CHILDHOOD PREDICTIVE ANALYTIC MODEL (ECPQIM4©)

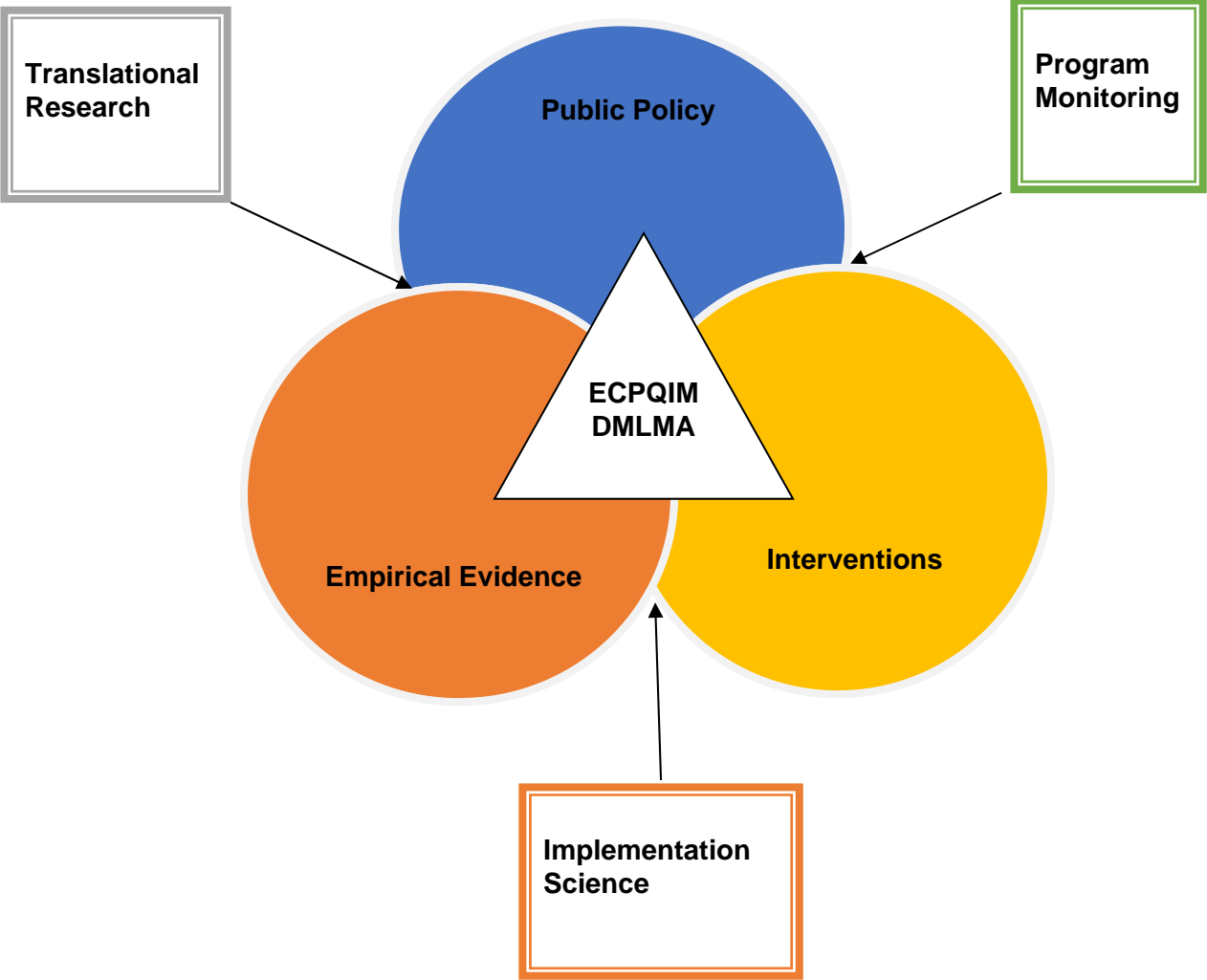**Richard Fiene, Ph.D.**

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Bennett Pierce Prevention Research Center
Seminar Presentation, Penn State University

RIKI

Research Institute for Key Indicators

Translational Research

Program Monitoring

Public Policy

ECPQIM DMLMA

Empirical Evidence

Interventions

Implementation Science

All Licensing Rules – Full Compliance Reviews

Differential Monitoring

How Often to Visit?
What is Reviewed?

Frequency

Abbreviated Tool

More Often
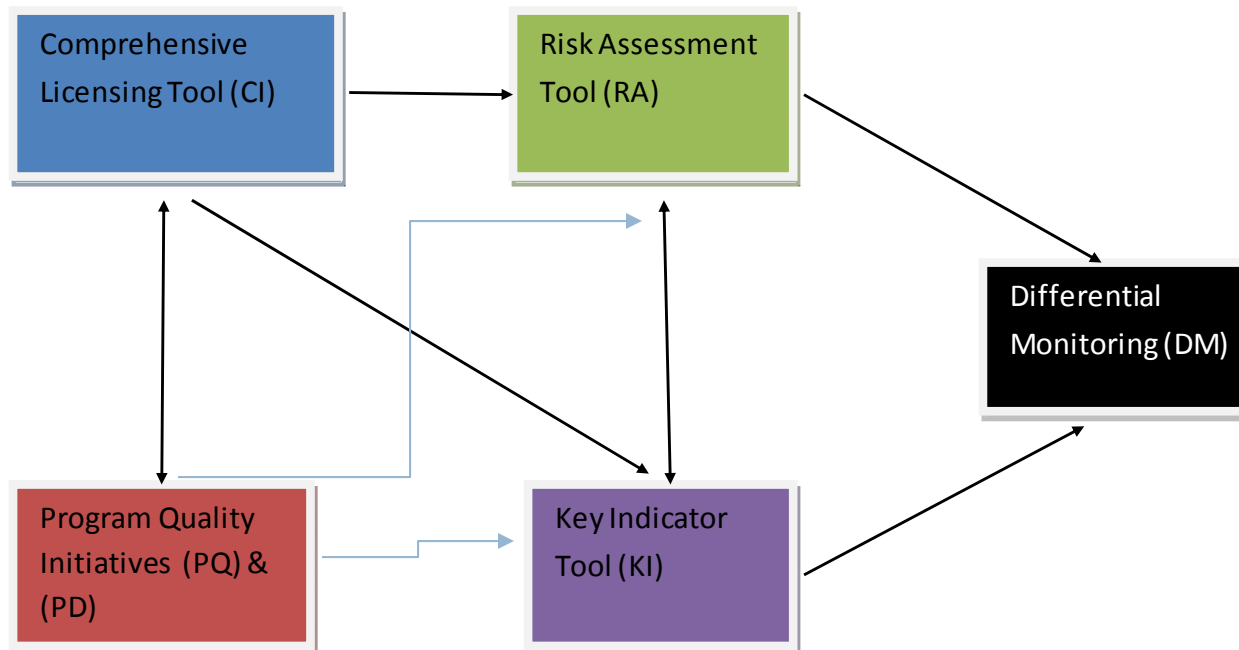**Less Often**

Risk Assessment Weights
Key Indicators Predictors

DIFFERENTIAL MONITORING LOGIC MODEL & ALGORITHM (DMLMA©) (Fiene, 2014): A 4th Generation ECPQIM – Early Childhood Program Quality Indicator Model
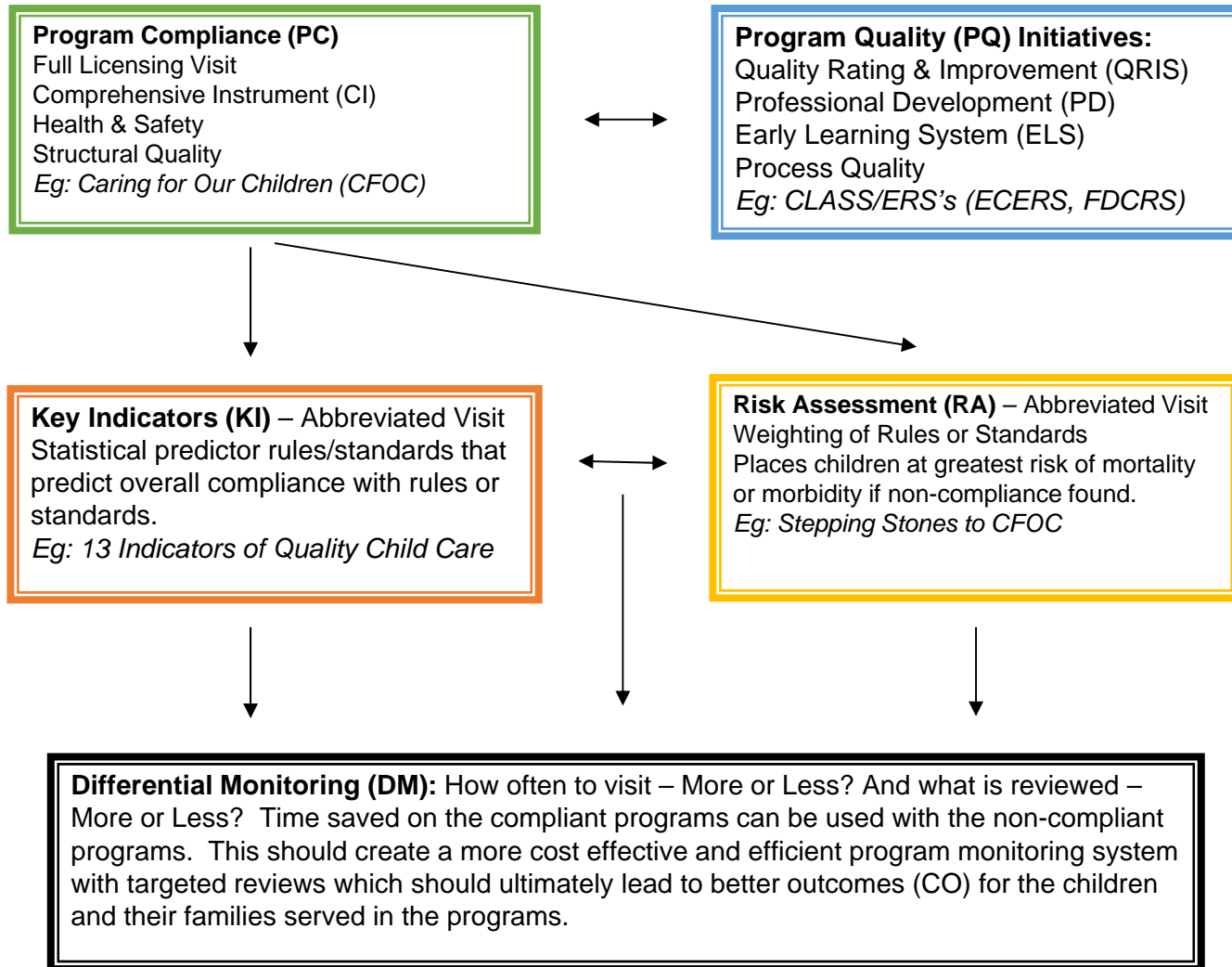
CI x PQ(PD) => RA + KI => DM => CO

Definitions of Key Elements:

CI = Comprehensive Licensing Tool (Health and Safety)(*Caring for Our Children*)(Structural Quality)
PQ **=** Program Quality Initiatives **(** *ECERS-R, FDCRS-R, CLASS, CDPES, QRIS, Accreditation)* (Process Quality)
PD = Program Quality Initiatives (cont) - Professional Development/Technical Assistance/Training
RA = Risk Assessment, (High Risk Rules/Standards)(*Stepping Stones*)
KI = Key Indicators (Predictor Rules/Standards)*(13 Key Indicators of Quality Child Care*)
DM = Differential Monitoring, (How often to visit and what to review)
CO = Child Outcomes (Developmental, Health, & Safety Outcomes)

Comprehensive Licensing Tool (CI)	Risk Assessment Tool (RA)	
Program Quality Initiatives (PQ) & (PD)	Key Indicator Tool (KI)	Differential Monitoring (DM)

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

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
Eg: 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.

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.**

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; DM (Differential Monitoring).

10 POINTS

ALL SYSTEMS IN PLACE AND LINKED.

<u>Example</u>
HEAD START

8 POINTS

KI & RA IN PLACE BUT NOT LINKED; AND PC & PQ LINKED.

<u>Example</u>
Georgia

6 POINTS

KI & RA IN PLACE & LINKED.

<u>Examples</u>
Illinois
New York

4 POINTS

KI & RA IN PLACE BUT NOT LINKED OR PC & PQ LINKED.

<u>Example</u>
None

2 POINTS

KI OR RA IN PLACE.

<u>Examples</u>
Colorado
Kansas

0 POINTS

NO SYSTEMS

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

For Additional Information:

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