RIKI/NARA

Licensing Measurement and Monitoring Systems

Regulatory science applied to human services regulatory administration

Richard Fiene, PhD
RESEARCH INSTITUTE FOR KEY INDICATORS

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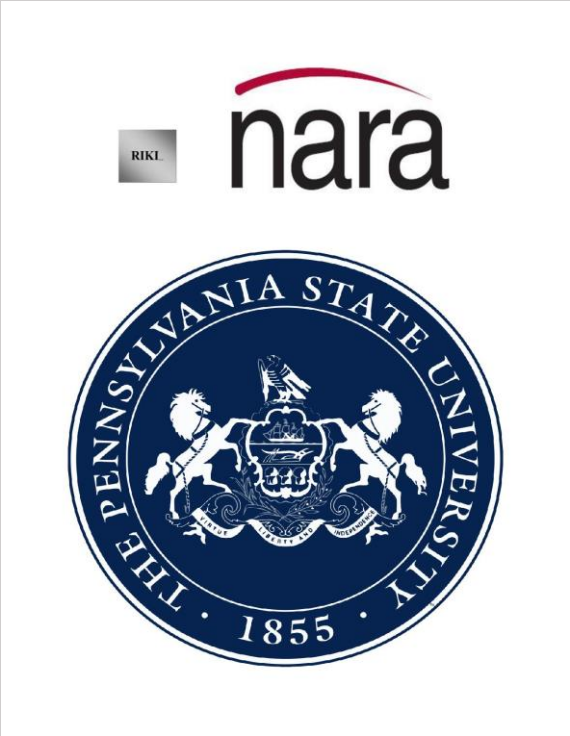
This eHandBook is the text to be used along with the NARA: National Association for Regulatory Administration's Licensing Measurement and Systems course which is part of the *NARA Licensing Curriculum*. This text will provide the learner with a basic introduction to licensing measurement and program monitoring state of the art key elements and principles.

Contents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Preface

The reason for writing this eHandBook is to provide a short easy to read introduction to licensing measurement and monitoring systems for licensing researchers and administrators, and for regulatory scientists and policymakers. It is not intended to be a comprehensive, in-depth analysis of licensing measurement. This eHandBook provides only a basic introduction to licensing measurement. For those readers who are interested in doing a deeper dive into licensing measurement, I recommend NARA's - National Association for Regulatory Administration's *Licensing Curriculum* and their online courses offered through the University of Southern Maine.

This eHandBook will provide the basics to get the interested learner pointed in the direction of learning more about the topic. As one will see licensing measurement has its challenges and idiosyncrasies which will need to be addressed by researchers and scientists. When I started this journey 50 years ago, I was somewhat taken aback by the different data distributions I encountered in regulatory science. Back then, regulatory science was not well formulated and program monitoring related to licensing was more qualitative (case notes) rather than quantitative. But I got really interested in public policy and macro-systems which seemed to have more and more impact on children and their families. This was the beginning of governmental rule promulgation and it was an exciting time to be on the cusp of this new research area.

I learned very quickly that I had to make several adjustments to the statistical methods I learned in graduate school to be able to analyze licensing data and measure regulatory compliance.

Several of the theories and methodologies were controversial when I proposed them because they went counter to the prevailing paradigms at that point in the 1960-70's. However, over time with many replications and validations, the new conceptual framework was accepted in the licensing and the regulatory science research literatures.

There are many people to thank over the years and obviously this has been a group effort in applying regulatory science to early care and education and then expanding it to human services and hopefully beyond. What I have found in my most recent readings is that regulatory science is being applied in many different content silos from the FDA, to economics, to banking, and of course within the human services particularly adult and child residential services. What appears to be lacking is a unifying theory that goes across these disparate content areas. That is why I think the introduction of the Regulatory Compliance Theory of Diminishing Returns is such an important contribution when we think about licensing/regulatory measurement and monitoring systems.

As I said earlier this eHandBook needs to be read along with the published materials on the RIKI (https://RIKInstitute.com) and NARA (https://www.naralicensing.org/key-indicators) websites. It is not intended as a standalone text for licensing measurement.

Rick Fiene, PhD, Research Psychologist & Regulatory Scientist
Research Institute for Key Indicators, Penn State, & NARA
June 2022

Chapter 1

Introduction to Licensing Measurement and Systems

This first chapter provides the learner with an introduction and overview to licensing measurement and systems. The ehandbook is sponsored by NARA - National Association for Regulatory Administration. NARA is the prominent international organization dealing with human services licensing. This ehandbook is part of the *NARA Licensing Curriculum* which you can find out more about by visiting NARA's website (https://www.naralicensing.org/nara-licensing-curriculum). NARA also offers a course by the same name and this book is the etextbook for that course; it is intended to be used in conjunction with the *NARA Licensing Measurement course*.

The NARA course will provide the learner with the major tenets of licensing measurement. The learner will discover as they go through this book that measurement in licensing is very different than other measurement systems found in many of the various social and human services. It has some very unique and idiosyncratic aspects which will provide us with increasing challenges in coming up with specific metrics in determining regulatory compliance.

The field of regulatory science is a very young field. Although regulations have been kicking around for well over 100 years, the science behind regulations is probably a quarter of this time. So, there is not a great deal of empirical evidence to draw upon which is discouraging but it is very encouraging and exciting at the same time because so much needs to be accomplished in establishing regulatory science's theory.

A great deal has been written in the past 20 years about regulatory science but there has not been a book written about measurement. It is hoped that this book will begin that discussion. It is also hoped that data driven via regulatory science will begin to inform regulatory administration and policy more clearly as we move forward.

This specific chapter will provide the conceptual framework and overview to licensing measurement and systems of regulatory compliance. It will provide the parameters of the book's organization and what will be covered throughout.

The other chapters to be covered in this book are the following:

1. *Overview/Introduction*
2. *Conceptual/Theoretical Framework*
3. *Principles of Instrument Design*
4. *Regulatory Compliance and Program Quality*
5. *Coordinated Program Monitoring & Differential Monitoring*
6. *What Research Tells Us; What Research Doesn't Tell Us*
7. *Future Directions*

The book is organized into the above 7 chapters. The book is short and provides the basics to licensing measurement and systems. It is a quick read for regulatory scientists and regulatory policy makers as well as licensing administrators. It can be read as a standalone text although it was intended as the textbook for the *NARA Licensing Measurement* course and it is recommended to be used with that course.

The *NARA Licensing Measurement* course is approximately 45 hours in length and is organized into 13 classes. It is equivalent to a three-credit course offered at most institutions of higher

education. Each class is organized into the following: an overview to what will be covered in the specific class followed by annotated PowerPoint slides, followed by a series of readings to support the specific lecture/PowerPoint slides (I will be referring to these various resources throughout this text). For the learner who wants to get a thorough grounding in licensing measurement and its accompanying program monitoring systems, I highly recommend them taking the course.

This book and the course are self-paced and are geared to the individual learner. It is totally self-contained meaning that all the necessary content is contained with the thirteen classes. If a learner just wants to get an overview of what licensing measurement is all about, then reading this short ebook will be a great start. You can always check out any of the other publications that are available on the RIKI Institute website. However, if a learner does have a specific question related to this textbook or if they are interested in taking the course and would like to get in touch with Dr Fiene, here is his contact information to reach out (email address is the best way to contact Dr Fiene):

Dr Richard Fiene, Research Psychologist & Professor of Psychology (ret)
Research Institute for Key Indicators (RIKI) & Penn State University
RFiene@RIKInstitute.com
Senior Research Consultant/Senior Regulatory Scientist
National Association for Regulatory Administration
RFiene@NARALicensing.org

Also, this ehandbook and the course will draw heavily from both the NARA and RIKI websites where many of the publications and research reside. Please feel free to go to http://RIKInstitute.com/publications/ to download any additional publications that may be of interest to you. As I said,

all the research is in the public domain and follows an open science sharing arrangement.

The links for additional publications for the NARA course are listed throughout this book or within the course format in the handouts section on the NARA website which you can download in their entirety or do it chapter by chapter. All course materials will be provided in either the lectures section or the handouts section of the class.

I thought it would be helpful to provide a bit of my background which will help the reader to put in context the content of this text and the course. This textbook is written by a research psychologist who has spent his career in improving child care quality through an early childhood program quality indicator model of training, technical assistance, quality rating and improvement systems, professional development, mentoring, licensing, risk assessment, differential program monitoring, key indicators, and accreditation. While content wise, I spent my career in early care and education, I evolved into a regulatory scientist because of the various positions I held within governmental service and interest area that focused on public policy, macro systems, and licensing rules.

Here are some additional commentaries taken from my NIH Bio Sketch that might help to fill in some details related to my background:

Dr Fiene is a retired professor of human development & psychology (Penn State University) where he was department head and founding director of the Capital Area Early Childhood Research and Training Institute. He is presently President & Senior Research Psychologist/Regulatory Scientist for the Research Institute for Key Indicators.

Dr Fiene is regarded as a leading international researcher/scholar on human services licensing measurement and differential monitoring systems. His regulatory compliance law of diminishing returns has altered human services regulatory science and licensing measurement dramatically in thinking about how best to monitor and assess licensing rules and regulations through targeted and abbreviated inspections.

His research has led to the following developments: identification of herding behavior of two-year old's, national early care and education quality indicators, mathematical model for determining adult child ratio compliance, solution to the trilemma (quality, affordability, and accessibility) in child care delivery services, Stepping Stones to Caring for Our Children, online coaching as a targeted and individualized learning platform, validation framework for early childhood licensing systems and quality rating & improvement systems, an Early Childhood Program Quality Improvement & Indicator Model, Caring for Our Children Basics, and has led to the development of statistical techniques for dealing with highly skewed, non-parametric data distributions in human services licensing systems.

Organization of the eHandBook

In the following chapters, the reader will find how licensing measurement is very unique when it comes to regulatory science. By knowing these unique characteristics, it will be easier to administer and monitor programs governed by licensing rules. This can be of benefit to those who administer licensing agencies and to those who are asked to conduct research on regulatory policies and compliance.

In Chapter 1, this chapter, provides the basic introduction and overview to the ehandbook as well as a short history of licensing

measurement and a timeline for early care and education standards focusing on *Caring for Our Children: Basics*.

In Chapter 2, the reader will be introduced to the theoretical and conceptual foundations to licensing measurement. The regulatory compliance theory of diminishing returns will be introduced which has had a tremendous impact on human services regulatory science and administration. Paradigm alternatives will be suggested that have guided regulatory science over the past several decades.

In Chapter 3, the principles of instrument design will be addressed. Obviously without a reliable and valid system of measurement it will be simply garbage in and garbage out. This is an area when it comes to instrument design that gets the short end of the stick many times. The level of measurement will be addressed and its impact on the types of statistics selected. Also, how best to design data bases will be addressed.

In Chapter 4, regulatory compliance and program quality will be discussed presenting it on a dichotomous ten-point polemic for the regulatory science field to consider. This is a very important chapter building off the theory of regulatory compliance of diminishing returns introduced in chapter 2.

In Chapter 5, the essence of program monitoring systems is introduced along with differential monitoring and its two major methodologies of key indicators and risk assessment. This chapter gets us thinking about what a licensing measurement will look like administratively.

Chapter 6 deals with the research literature what we know and what still needs to be addressed, the gaps in our regulatory

science knowledge base. Examples are provided of success stories across the USA and internationally.

The last chapter, Chapter 7, provides us with where do we go from here with licensing measurement and systems. What are the next steps.

A Brief History of Licensing Measurement

The history of licensing measurement and regulatory compliance has actually a rather long lineage but is still in its infancy in terms of development. In the early stages most licensing visits and inspection results were recorded via anecdotal records/case records with the licensing staff recording their results in more social work note taking. It was a qualitative type of measurement with very little quantitative measurement occurring with the exception of basic demographics, number of clients, number of caregiving staff, etc… This qualitative approach worked very well when there were not many programs to be monitored and there were sufficient licensing staff to do the monitoring and conduct the inspections.

This all started to change in the 1980's when Instrument Based Program Monitoring (IPM) was introduced and started to be adopted by state licensing agencies throughout the United States. Just as a footnote, this brief history is pertinent to the USA and does not include other countries although the Canadian Provinces have followed a similar route as the USA. The reason for the introduction of an IPM approach was the tremendous increase in early care and education programs in the 1960's and 1970's. It was difficult for licensing staff to keep up with the increased number of programs in their monitoring

efforts. There needed to be a more effective and efficient methodology to be employed to deal with these increases.

A very influential paper was written in 1985 and published in *Child Care Quarterly* which introduced IPM along with Licensing Key Indicators, Risk Assessment (Weighting), and Differential Monitoring (Abbreviated Inspections). This paper outlined the various methodologies and their use by a consortium of states to test the viability of this new approach to licensing measurement, regulatory compliance, and program monitoring. Also, the terminology has changed over the decades. Back in 1985 weighting was used rather than risk, abbreviated inspections were used rather than differential monitoring, targeted monitoring, or inferential monitoring. All these terms can be used interchangeably as they have been over the years, but the first introduction of them back in 1985 utilized weighting and abbreviated inspections.

In the early 1990's the risk assessment methodology was used to develop *Stepping Stones to Caring for Our Children*, the comprehensive national health and safety standards for early care and education (ECE) programs in the USA. This was a major development in attempting to develop national voluntary standards for child care in the USA.

It was during this time that two other very significant discoveries occurred related to licensing data distributions: 1) Licensing data are extremely skewed and do not follow a normal curve distribution. This fact has a significant impact on the statistics that can be used with the data distributions and how data analyses are performed. For example, data dichotomization is warranted with licensing data; 2) Regulatory compliance data are not linear when compared to program quality measures but are more plateaued at the substantial and full regulatory compliance levels. The data appear to follow the

Law of Diminishing Returns as compliance moves from substantial to full (100%) regulatory compliance. This finding has been replicated in several studies and has been controversial because it has led to the issuing of licenses to programs with less than full compliance with all rules/regulations/standards. These two discoveries have been very influential in tracking developments in licensing measurement since their discoveries.

In the new century as states began to adopt the various methodologies it became necessary to have a standardized approach to designing and implementing them. The National Association for Regulatory Administration (NARA) took up this role and in 2000 produced a chapter on Licensing Measurement and Systems which helped to guide states/provinces in the valid and reliable means for designing and implementing these methodologies. In 2002 a very important study was conducted by the Assistant Secretary's Office for Planning and Evaluation (ASPE) in which they published the *Thirteen Indicators of Quality Health and Safety and a Parent's Guide* to go along with the research. This publication further helped states as they revised their licensing and program monitoring systems for doing inspections of early care and education facilities based upon the specific indicators identified in this publication. Both publications have been distributed widely throughout the licensing world.

During the first decade of the new century, *Stepping Stones for Caring for Our Children* went through a second edition. This publication and the ASPE publications were very useful to states as they prepared their Child Care Development Fund (CCDF) plans based upon Child Care Development Block Grant (CCDBG) funding.

From 2010 to the present, there have been many major events that have helped to shape licensing measurements for the

future. *Caring for Our Children Basics (CFOCB)* was published and immediately became the default voluntary early care and education standards for the ECE field. The *CFOCB* is a combination of the risk assessment and key indicator methodologies. Three major publications by the following Federal agencies: HHS/ACF/USDA: Department of Health and Human Services/Administration for Children and Families/United States Department of Agriculture, OCC: Office of Child Care, and ASPE: Assistant Secretary's Office for Planning and Evaluation dealing with licensing and program monitoring strategies were published. These publications will guide the field of licensing measurement for years to come. The Office of Head Start developed and implemented their own Head Start Key Indicator (HSKI) methodology. And in 2016, CCDBG was reauthorized and differential monitoring was included in the legislation being recommended as an approach for states to consider.

Most recently, the Office of Head Start is revising their monitoring system that provides a balance between compliance and performance. This system revision will go a long way to enhancing the balance between regulatory compliance and program quality. Also, there has been experimentation with an *Early Childhood Program Quality Indicator* instrument combining licensing and quality indicators into a single tool. These two developments help with breaking down the silo approach to measurement where licensing and quality initiatives are administered through separate and distinct approaches such as licensing versus professional development systems versus quality rating and improvement systems. A paradigm shift in which an *Early Childhood Program Quality Improvement and Indicator Model* is proposed. The paradigm shift should help to make licensing measurement more integrated with other quality initiatives.

The licensing field continues to make refinements to its measurement strategies in building a national/international regulatory compliance data base. More and more is being learned about the nuances and idiosyncrasies of licensing data, such as moving from a nominal to an ordinal driven data system. For example, NARA and the Research Institute of Key Indicators (RIKI) have entered into an exclusive agreement for the future development of licensing measurement strategies via differential monitoring, key indicators for licensing and program quality, and risk assessment approaches. Several validation studies have been completed in testing whether the various methodologies work as intended. A significant Office of Program Research and Evaluation (OPRE) *Research Brief* which developed a framework for conducting validation studies for quality rating and improvement systems has been adapted to be used in licensing measurement.

For additional updates to licensing measurement, please check out and follow these RIKINotes Blog posts. There are and will be many examples of licensing measurement enhancements. Also, although much of the research on licensing measurement has been completed in the ECE field, the methodologies, models, systems, and approaches can be utilized in any human service arena, such as child residential or adult residential services. Also, NARA's chapter in their Licensing Curriculum has been developed into a full-blown course, please go to the following web page for additional information.

A Timeline of ECE Standards and Program Monitoring in the United States: *Caring for Our Children Basics*

It all started in and around 1965 when the Federal government got into early care and education (ECE) in earnest with Head Start and federally funded day care for low-income families. It started off slowly but began to pick up momentum with exciting

studies and research applying principles from developmental psychology to policy making. Researchers and policy makers wanted to make sure that these new programs were not detrimental to young children since our frame of reference were children being raised in orphanages and the ultimate outcome for children was not positive. Would ECE have the same impact?

Issues around quality, appropriateness of standards, and demonstration programs became the focal point of federal research funding. The focal point of this essay is on the appropriateness of the ECE standards and the resulting monitoring systems that were to become key to the federal involvement in early care and education. This essay will be organized by the following 50 years neatly broken out by each decade to get us from this beginning in 1965 until the publication of *Caring for Our Children Basics* in 2015 by the federal government, the Administration for Children and Families, U.S. Department of Health and Human Services. A look at the 2020 decade with a future note is also appended to this essay.

1970s

During the 1970's, the federal government became concerned about what were to be the standards for this new national program related to federally funded ECE for low-income families and their children. Head Start was a separate entity and we will revisit Head Start later but our focus for now is on the federally funded programs which became known back then generically as day care. This nomenclature changed to child care and to finally early care and education (ECE) during this 50-year history. The initial standards for day care were the *Federal Interagency Day Care Requirements (FIDCR)*. A very large appropriateness research study led by Abt Associates to determine what were

the most salient standards and their intended impact on children while in day care was conducted during this decade. These standards were to be federally mandated requirements for any program receiving federal funding. This is where group size and adult-child ratios standards became such important safeguards and surrogates for children's health and safety in day care programs.

It also became of interest for the federal government to design the monitoring system that would determine compliance with the FIDCRs. But it became clear to the original designers of this new system that the monitoring of the FIDCR was going to be difficult to do across the full USA. So, the question became, is there a way to monitor the standards in the most effective and efficient manner? This question and the future of the FIDCR were to be altered and put on hold once we moved into the next decade.

1980s

A change in federal administration and a resulting change in philosophy related to the federal role in America altered many things and one of them was the relationship of the federal government and the states. Rather than the federal government mandating day care requirements, the focus changed with the locus of control moving from the federal level to the state level via block grant funding with very few federal requirements. This meant a moratorium to FIDCR and its ultimate demise. The federal government was not going to be in the business of providing day care, this was going to be the jurisdiction of the states. Head Start did become the exception to this rule with its own standards and monitoring system.

The focus of federal funding switched from the national to the state level in determining compliance with each state's

respective child care licensing rules and not with an overarching FIDCR. There was still interest in making these state monitoring systems as effective and efficient but there was no interest in the federal government determining what these requirements would be. Two monitoring approaches grew out of this need for effectiveness and efficiency: risk assessment and key indicators. These two approaches were originally designed and implemented as part of a federally funded project called the Children's Services Monitoring Transfer Consortium in which a group of five states: New York, Michigan, Pennsylvania, West Virginia, and California teamed up to explore their most effective and efficient monitoring systems and begin transferring these systems to one another and beyond.

These two monitoring approaches were tested in the above respective states and it was determined that their impact had a positive effect on the children who were in those day care centers. This was a major finding, similar to the FIDCR appropriateness study, in which these approaches provided safeguards related to the health and safety of children while in day care.

1990s

By the 1990s, it became clear that the federal government had pretty much drawn back from any leadership role in having mandated federal requirements when it came to health and safety in child care. It was left to national ECE advocates who were positioned within the federal government (Administration for Children and Families; Maternal and Child Health Bureau) as well as throughout the USA with national and state agencies and organizations (American Academy of Pediatrics; American Public Health Association, National Resource Center for Health and Safety in Child Care) that saw a need for child care health and safety recommendations at least. If we could not have

requirements, we could at least have recommendations and provide guidance to child care programs throughout the USA.

This led to the first edition of *Caring for Our Children* which was a comprehensive set of child care health and safety standards. It was a major game changer for the ECE field because now there was a universal set of standards based upon the latest research literature for states to use as they considered revising and updating their respective state licensing child care rules.

But there was a problem. *Caring for Our Children* was a comprehensive set of health and safety standards which was their strength but at the same time it was their weakness. They were so comprehensive (well over 500 well researched standards) that they were intimidating and it was difficult to determine where to begin for the states.

Several researchers remembered the two approaches to monitoring designed in the previous decade and wondered if they could be helpful in focusing or targeting which of the standards were the most critical/salient standards. The risk assessment approach to monitoring appeared to have the most immediate applicability and *Stepping Stones* to *Caring for Our Children* was born. This document clearly articulated which of the 500+ *Caring for Our Children* standards placed children at greatest risk for mortality or morbidity by not being in compliance with the respective standard. Since the early 1990s, *Caring for Our Children* and *Stepping Stones to Caring for Our Children* have gone through three editions and have become very important resources to state licensing agencies as they revise, update and improve their ECE rules.

2000s

In this decade several federal and national organizations began to use *Caring for Our Children* standards in innovative ways to

measure how well ECE looked at a national level. The Assistant Secretary's Office for Planning and Evaluation in the U.S. Department of Health and Human Services published the *Thirteen Indicators of Quality Child Care* based upon a core set of predictor standards from *Caring for Our Children*. These were standards that predicted overall compliance with all the standards and were seen as an efficient monitoring system. NACCRRA (National Association for Child Care Resource and Referral Agencies) began publishing a national report card on how well states met specific standards and monitoring protocols based upon similar predictor standards from *Caring for Our Children*.

These efforts helped states to make significant changes in their ECE rules in their respective states and in a very voluntary way suggested a means for national standards for the ECE field although we would need to wait until the next decade in order to see such a published document of national ECE health and safety standards for early care and education: *Caring for Our Children Basics*.

2010s

By the 2010s, ECE had grown into a very large but unwieldly assortment of programs with varying levels of quality. Again because of major federal funding, the Child Care Development Block Grant, along with changes and enhancements in professional development, accreditation systems, quality rating and improvement systems, the ECE landscape had become more complex and less easy to navigate. And rather than coming together it was clearly more fragmented than ever.

We had very minimal requirements for the federal funding and most of these requirements were geared to the state agency using the state's respective licensing rules as the threshold for

standards. This approach worked well with states with excellent licensing rules, but it wasn't working as well with states who did not have equally excellent licensing rules. We still did not have a core set of standards for ECE programs. Enter *Caring for Our Children Basics* which took the best aspects of the above two monitoring approaches, risk assessment and key indicators and molded it into this new document. This work was led by the federal government's Administration for Children and Families, U.S. Department of Health and Human Services and although the standards are still recommendations and guidance, it is our best attempt at having national standards for early care and education. It is an attempt to provide guidance to the full ECE field, child care, Head Start, preschool, and center based as well as home-based care. It would be nice to have *Caring for Our Children Basics* as the health and safety foundation for early care and education throughout the USA. I don't see this happening in my lifetime.

2020s: Looking to the Future

As a footnote to this essay, the new decade has been dealt with a major curve ball with COVID19 rearing its ugly head and ECE has been impacted greatly because of this pandemic. As of this writing we are nowhere closer to a solution to getting ECE programs back on line. If anything, the pandemic really demonstrated the fragility of the ECE system we have built over the past 50 years and it clearly has not done very well. My hope is that we can learn from the past 50 years and not continue another 50 years along the same route; although I am guessing that many ECE advocates would be glad to have what we had before the pandemic because what we have right non-sustainable. We know a lot more today than what we knew back in 1965 when we were worried about would day care hurt children's development. We know today that quality ECE

benefits children but unfortunately, we are no closer to attaining this today than we were 50 years ago.

Two programs that have been very successful in avoiding these pitfalls are Head Start and the national Military Child Care program. Both programs are exemplary examples of quality early care and education being provided with separate funding streams and standards. Interesting enough when the Administration for Children and Families published *Caring for Our Children Basics*, both these programs were part of the reach of the published standards. As we re-invent and re-structure ECE we should be looking to both these very successful programs for guidance.

Chapter 2

Conceptual and Theoretical Underpinnings, Program Monitoring Paradigms

This second chapter provides the learner with the key conceptual and theoretical foundations related to licensing measurement. As you have seen from the first chapter, licensing measurement does have some idiosyncrasies which are not present in other data distributions.

Well, the same thing can be said when it comes to the conceptual and theoretical underpinnings. One of the first limitations that will be noted is the regulatory compliance theory of diminishing returns which has tremendous implications when implementing and enforcing rules. It had always been assumed that full 100% regulatory compliance with rules was what made a high-quality program. However, in the late 1970's and into the early 1980's, it became clear that this was not the case. When this hypothesis was tested it became clear that moving from low regulatory compliance to substantial regulatory compliance did demonstrate that program quality differed significantly in the substantial regulatory compliant programs being of a higher quality than those of lower regulatory compliance. However, when one moved from the substantial regulatory compliance level to the full 100% regulatory compliance level, there was a definite plateauing effect in which the programs were not increasing in quality as previously and in some cases, actually decreased in quality.

This above result was surprising and very controversial when it was first published in the mid 1980's. Many, if not most, regulatory compliance specialists did not agree with the finding.

However, this relationship has held up in many other studies conducted since then and in other human service areas. It became the new rule in clearly demonstrating if not a decline, always a plateauing effect in moving from substantial to full compliance. Today because of all these supporting studies, the result is generally accepted and has influenced public regulatory compliance policy formulation throughout the world.

This regulatory compliance theory of diminishing returns has had tremendous impacts in how we have come to measure regulatory compliance in the licensing field. Rather than viewing it in a linear modality, it suggested that a more targeted, non-linear modality or metric might be more effective and efficient. Rather than focusing on full regulatory compliance it suggested that a key indicator, abbreviated, or targeted monitoring of rules was a better approach.

Without the regulatory compliance theory of diminishing returns, the focus on what has become differential monitoring or targeted monitoring would never have occurred. There would have been no need to move from always requiring full 100% regulatory compliance with all rules. This is a very important distinction and you, the learner, will see many applications and implications as you move through the chapters in this text.

Moving from the Theory to the Conceptual

Conceptually, licensing measurement is built around obviously licensing but there are other systems which impact on licensing which are demonstrated in the first licensing measurement class when one compares the various regulatory and non-regulatory systems in the *Morgan Model - Methods for Achieving Quality Child Care.* There are contractual systems, such as QRIS (Quality Rating and Improvement System) or other types of quality

initiatives. These other types of quality initiatives are non-contractual systems, such as professional development or training or technical assistance systems; or accreditation systems.

These above systems can be integrated into a unified model called the Early Childhood Program Quality Improvement/Indicator Model or Differential Monitoring Logic Model and Algorithm (ECPQI2M/DMLMA) which is depicted in the lecture slides from the NARA Licensing Measurement Course that accompanies this text if you desire to utilize those resources and is detailed in several of the handouts. Since this will become the unifying framework when discussing licensing measurement, I would suggest that you as the learner spend a good deal of time reviewing those slides and handouts. I would think that you will want to return to them as you move through the upcoming chapters and classes as part of the NARA course to make certain you continue to understand how all the disparate pieces fit together into a uniformed whole.

By using the ECPQI2M/DMLMA (also see chapter 5 which provides a more detailed step by step guide for the development within a state licensing agency) it offers all the key elements to building an effective and efficient program monitoring system by integrating regulatory compliance and program quality and professional development systems along with differential monitoring's risk assessment and key indicator methodologies.

There are readings related to professional development that are important components to making sure that the ECPQI2M is working as it should. One of the consistent key indicators deals with professional development/training. There are examples of creative and innovative ways the training can be

delivered over the internet. Pay particular attention to the iLookOut program, especially to its delivery system. Check out the https://RIKInstitute.com/publications/ Website for these publications and reports, there are several articles that describe the program as well as its innovative cognitive mapping and online delivery platform.

Program Monitoring Paradigms

This section provides some key elements to two potential regulatory compliance monitoring paradigms (Differential/Relative versus Absolute/Full) for regulatory science based upon the Regulatory Compliance Theory of Diminishing Returns.

As one will see, there is a need within regulatory science to get at the key measurement issues and essence of what is meant by regulatory compliance. There are some general principles that need to be dealt with such as the differences between individual rules and rules in the aggregate. Rules in the aggregate are not equal to the sum of all rules because all rules are not created nor administered equally. And all rules are to be adhered to, but there are certain rules that are more important than others and need to be adhered to all the time. Less important rules can be in substantial compliance most of the time but important rules must be in full compliance all of the time.

Rules are everywhere. They are part of the human services landscape, economics, banking, sports, religion, transportation, housing, etc... Wherever one looks we are governed by rules in one form or another. The key is determining an effective and efficient modality for negotiating the path of least resistance in complying with a given set of rules2. It is never about more or

less rules, it is about which rules are really productive and which are not. Too many rules stifle creativity, but too few rules lead to chaos. Determining the balance of rules is the goal and solution of any regulatory science paradigm.

Differential/Relative versus Absolute/Full Regulatory Compliance Paradigms: this is an important key organizational element in how rules are viewed when it comes to compliance. For example, in an absolute/full approach to regulatory compliance either a rule is in full compliance or not in full compliance. There is no middle ground. It is black or white, no shades of gray as are the cases in a differential/relative paradigm. It is 100% or zero. In defining and viewing these two paradigms, this dichotomy is the organizational key element for this paper. In a differential/relative regulatory compliance paradigm full compliance is not required and emphasis on substantial regulatory compliance becomes the norm.

Based upon this distinction between differential/relative and absolute/full regulatory compliance paradigms, what are some of the implications in utilizing these two respective approaches. Listed below are the basic implications that occur when selecting either of the two approaches on program monitoring systems: differential/relative versus absolute/full regulatory compliance paradigms.

There are ten basic implications that will be addressed: 1) Substantial versus Monolithic. 2) Differential Monitoring versus One size fits all monitoring. 3) “Not all standards are created equal” versus “All standards are created equal”. 4) “Do things well” versus “Do no harm”. 5) Strength based versus Deficit based. 6) Formative versus Summative. 7) Program Quality versus Program Compliance. 8) 100-0 scoring versus 100 or 0 scoring. 9) QRIS versus Licensing. 10) Non-Linear versus Linear.

1) Substantial versus Monolithic: in monolithic regulatory compliance monitoring systems, it is one size fits all, everyone gets the same type of review (this is addressed in the next key element below) and is more typical of an absolute paradigm orientation. In a substantial regulatory compliance monitoring system, programs are monitored on the basis of their past compliance history and this is more typical of a relative paradigm orientation. Those with high compliance may have fewer and more abbreviated visits/reviews while those with low compliance have more comprehensive visits/reviews.

2) Differential Monitoring versus One Size Fits All Monitoring: how does this actually look in a program monitoring system. In differential monitoring (Differential/Relative Paradigm), more targeted or focused visits are utilized spending more time and resources with those problem programs and less time and resources with those programs that are exceptional. In the One Size Fits All Monitoring (Absolute/Full Paradigm), all programs get the same type/level of review/visit regardless of past performance.

3) “Not all standards are created equal” versus “All standards are created equal”: when looking at standards/rules/regulations it is clear that certain ones have more of an impact on outcomes than others. For example, not having a form signed versus having proper supervision of clients demonstrates this difference. It could be argued that supervision is much more important to the health and safety of clients than if a form isn’t signed by a loved one. In a differential/relative paradigm, all standards are not created nor administered equally; while in an absolute/full paradigm of regulatory compliance, the standards are considered created equally and administered equally.

4) “Do things well” versus “Do no harm” (this element is dealt with in the 4th chapter below as well): “doing things well” (Differential/Relative Paradigm) focuses on quality of services rather than “doing no harm” (Absolute/Full Paradigm) which focuses on protecting health and safety. Both are important in any regulatory compliance monitoring system but a balance between the two needs to be found. Erring on one side of the equation or the other is not in the best interest of client outcomes. "Doing no harm" focus is on the "least common denominator" – the design and implementation of a monitoring system from the perspective of focusing on only 5% of the non-optimal programs ("doing no harm") rather than the 95% of the programs that are "doing things well".

5) Strength based versus Deficit based: in a strength-based monitoring system, one looks at the glass as “half full” rather than as “half empty” (deficit-based monitoring system). Emphasis is on what the programs are doing correctly rather than their non-compliance with standards. A strength-based system is non-punitive and is not interested in catching programs not doing well. It is about exemplars, about excellent models where everyone is brought up to a new higher level of quality care.

6) Formative versus Summative: differential/relative regulatory compliance monitoring systems are formative in nature where there is an emphasis on constant quality improvement and getting better. In absolute/full regulatory compliance monitoring systems, the emphasis is on being the gate-keeper (more about the gate-keeper function in the next section on regulatory compliance/licensing and program quality) and making sure that decisions can be made to either grant or deny a license to operate. It is about keeping non-optimal programs from operating.

7) Program Quality versus Program Compliance: (this element is dealt with in greater detail in the fourth chapter) differential/relative regulatory compliance monitoring systems focus is on program quality and quality improvement while in absolute/full regulatory compliance monitoring systems the focus in on program compliance with rules/regulations with the emphasis on full, 100% compliance.

8) “100 – 0 scoring” versus “100 or 0 scoring”: in a differential/relative regulatory compliance monitoring system, a 100 through zero (0) scoring can be used where there are gradients in the scoring, such as partial compliance scores. In an absolute/full regulatory compliance monitoring system, a 100% or zero (0) scoring is used demonstrating that either the standard/rule/regulation is fully complied with or not complied with at all (the differences between nominal and ordinal measurement is dealt with in the next section on regulatory compliance/licensing and program quality).

9) QRIS versus Licensing: examples of a differential/relative regulatory compliance monitoring system would be QRIS – Quality Rating and Improvement Systems. Absolute/full regulatory compliance systems would be state licensing systems. Many programs talk about the punitive aspects of the present human services licensing and monitoring system and its lack of focus on the program quality aspects in local programs. One should not be surprised by this because in any regulatory compliance system the focus is on "doing no harm" rather than "doing things well". It has been and continues to be the focus of licensing and regulations in the USA. The reason QRIS - Quality Rating and Improvement Systems developed in early care and education was to focus more on "doing things well" rather than "doing no harm". This is not the case in many Canadian

Provinces and European countries in which they have incorporated program quality along with specific regulatory requirements.

10) Non-Linear versus Linear: the assumption in both differential/relative and absolute/full regulatory compliance monitoring systems is that the data are linear in nature which means that as compliance with rules increases, positive outcomes for clients increases as well. The problem is the empirical data does not support this conclusion. It appears from the data that the relationship is more non-linear where there is a plateau effect with regulatory compliance in which client outcomes increase until substantial compliance is reached but doesn't continue to increase beyond this level. There appears to be a "sweet spot" or balancing of key rules that predict client outcomes more effectively than 100% or full compliance with all rules – this is the essence of the Theory of Regulatory Compliance – substantial compliance with all standards or full compliance with a select group of standards that predict overall substantial compliance and/or positive client outcomes.

As the regulatory science and administrative fields in general continue to think about the appropriate monitoring systems to be designed and implemented, the above structure should help in thinking through what these measurement systems' key elements should be. Both paradigms are important, in particular contexts, but a proper balance between the two is probably the best approach in designing regulatory compliance monitoring systems.

Chapter 3

Instrument Design, Reliability and Validity, Statistical Methods and Databases

This third chapter provides the learner with the key principles of instrument design. As you have seen there are idiosyncrasies' conceptually and theoretically and there are limitations as well, when it comes to instrument design. A major limitation with licensing data is that it is basically, nominal in nature. It fits the format of Yes or No responses. It is not ordinal in any fashion, or at least it hasn't been for the past 50 years. In fact, it is only in the past 30 or so years that licensing data moved from being predominantly qualitative to quantitative. This change started in the 1980's with the publication of Instrument based program monitoring. Prior to that most licensing studies were written as social work case studies with a great deal of narrative detail but short on data utilization that could be used at the macro level.

Instrument based program monitoring has its critics who are not overly excited about its checklist type approach. However, if a state is going to track where there are specific issues related to regulatory compliance it will be difficult unless an instrument/tool/checklist is not used in data collection. If there is continued reliance on narrative reports solely it will be difficult if not impossible to find any real patterns in the data. It is possible with the latest developments in qualitative analyses but it is not recommended as the sole means for tracking regulatory compliance. I prefer a mixed methods approach which focuses on the strengths from both the quantitative and qualitative and combines both together.

Without an instrument-based program monitoring approach it would be impossible to utilize the risk assessment and especially the licensing key indicator predictor methodologies. In fact, it is really a pre-requisite for designing and implementing a targeted monitoring or differential monitoring approach.

In instrument design it is important to utilize the triangulation measurement strategy that looks for observation first, followed by record/document review, and then lastly by doing interviews of staff or parents. The majority of data collection should be through observations made in the classroom or facility. When observations cannot be made look for policies, files, documents that contain the necessary data and then lastly do interviews.

Reliability and Validity

This section provides the learner with the key principles of reliability and validity which are the mainstay of any measurement system. Without these two key principles we do not have a measurement system we can rely on. Reliability deals with consistency across inspectors to make certain that what is to be measured is measured accurately. Validity demonstrates that the system is working as it is supposed to. The results are what should be expected from a licensing or regulatory compliance system.

The readings and handouts provide many examples of validation studies conducted in the past decade demonstrating the validity and reliability of the licensing key indicator predictor and risk assessment methodologies (State of Washington and the Province of Saskatchewan are the best examples of these validation studies).

Since the large influx in the use of these methodologies over the past couple of decades it was incumbent upon us to determine if these methodologies were both reliable and valid. Based upon these validation studies, it can now be said with a great deal of certainty that the methodologies do what they were intended to do. They statistically predict overall regulatory compliance and they focus on those rules that place children in greatest risk of morbidity or mortality keeping them safe. So, the tenet, which will be emphasized throughout this course "Do No Harm" is upheld!

The NARA Licensing Measurement course provide the lecture slides where an overview and the key elements to doing validation studies, while the readings and handouts provide more of the details and the results from these studies. (https://www.naralicensing.org/key-indicators)

Statistical Methods and Data Bases

This section deals with the statistical methods used and the construction of the databases in licensing. As I have said repeatedly in my writings over the years there are many limitations related to licensing measurement. The statistical methods that can be used with licensing data are limited also, because we are dealing with nominal data that are severely skewed. Non-parametric statistics is warranted and to deal with the severely skewed data, dichotomization of the data base is warranted.

Dealing with data that are not normally distributed poses some real challenges in analyzing licensing data sets. It is paramount that one runs basic descriptive statistics in assessing the mean, standard deviation, variance, skewness, and kurtosis. It will help in identifying how badly the data has outliers in a very

quantitative manner. It will also help in determining where the cut scores or thresholds should be for defining the high regulatory compliance and the low regulatory compliance groups. The Fiene Licensing Predictor Rules and their respective Fiene Coefficients are determined by using the phi coefficient in determining correlations between each rule and the high/low groups for regulatory compliance. This is a statistic used with nominal data and is used a great deal in the tests and measurement research literature invalidating testing procedures.

The databases should be saved in .csv formatting from an Excel file. It is easier to import a .csv file into SPSS or PSPP which is the preferred statistical package for conducting these analyses. But definitely any statistical package can be used as well, such as SAS for example. Outside of generating Fiene Coefficients, there are no other statistical techniques that are needed in analyzing the database.

The readings list (https://RIKInstitute.com/publications/) provides most, if not all, of the technical research notes generated by the Research Institute for Key Indicators. These tech research notes provide the latest and most up to date information about any changes in the methodologies for generating licensing key indicator predictor rules and risk assessment rules. These technical research notes are really intended for the serious licensing research and regulatory scientist to delve into. They provide the specifics to the various statistical methodologies with specific algorithms and logic modeling.

Chapter 4

Regulatory Compliance and Program Quality

This fourth chapter provides the learner with the similarities and differences between regulatory compliance and program quality. In the second chapter the regulatory compliance theory of diminishing returns was presented which demonstrated a non-linear relationship between regulatory compliance and program quality. In this chapter, additional concepts will be presented to deal with this dynamic tension between regulatory compliance and program quality and how we can build one upon the other.

In fact, the future of licensing and regulatory compliance will be heavily influenced by this relationship between regulatory compliance and program quality. Many jurisdictions are attempting to build in quality to their rules/regulations. They are being very creative in either building separate systems (Quality Rating and Improvement Systems: QRIS) or right into the rules themselves in more of an ordinal format.

QRIS: Quality Rating and Improvement Systems and other Quality Initiatives

This section provides the learner with key examples from the program quality arena, such as QRIS and professional development. The ECPQI2M model presented here has these two systems prominently displayed along with the regulatory compliance or licensing system. Together they form the solid foundation for providing a very effective delivery system of services. When these are combined with risk assessment and the key indicator methodologies one can add efficiency to the

effectiveness side of the equation. The next chapter, Chapter 5, will get into more details about how to design an ECPQI2M model along with its associated logic model (DMLMA: Differential Monitoring Logic Model and Algorithm).

As was mentioned in the previous section, there is a delicate balance between regulatory compliance and program quality. At all times, the ECPQI2M is to keep both regulatory compliance and program quality in balance, to keep health & safety and quality on an even keel; but as we have seen and will see later in this course, this balancing act can get out of kilter at times.

One of the publications produced for OPRE about QRIS Validation is directly applicable to licensing measurement and has been used within this context in the validation studies that will be described in this course. This is an important application of this new framework when it comes to validation. It is not just for QRIS but can be applied to licensing as well. The state of Washington has probably some of the best examples. Please check out these resources and readings later on the RIKI website for additional examples. Look specifically for the Validation Framework Research Brief published by OPRE and the state of Washington Research Agenda Report.

Regulatory Compliance/Licensing and Quality

This section of the chapter will delineate the differences between regulatory compliance and quality. It will provide the essential principles and elements that clearly demonstrate the differences and their potential impact on program monitoring. Obviously, there is some overlap between this section and the above section dealing with regulatory compliance monitoring paradigms. When we think about regulatory compliance measurement, we are discussing licensing systems. When we

think about quality, we are discussing Quality Rating and Improvement Systems (QRIS), accreditation, professional development, or one of the myriad quality assessment tools, such as the Classroom Assessment Scoring System (CLASS) or Environment Rating Scales (ERS's). All these systems have been designed to help improve the health and safety of programs (licensing) to building more environmental quality (ERS), positive interactions amongst teachers and children (CLASS), enhancing quality standards (QRIS, accreditation), or enhancing teacher skills (professional development).

There are ten basic principles or elements to be presented (they are presented in a binary fashion demonstrating differences): 1) "Do no harm" versus "Do good". 2) Closed system versus Open system. 3) Rules versus Indicators. 4) Nominal versus Ordinal measurement. 5) Full versus Partial compliance. 6) Ceiling effect versus No Ceiling effect. 7) Gatekeeper versus Enabler. 8) Risk versus Performance. 9) Structural versus Process Quality. 10) Hard versus Soft Data.

1) Let's start with the first principal element building off what was discussed in Chapter 2, "Do No Harm" versus "Do Good". In licensing, the philosophy is to do no harm, its emphasis is on prevention, to reduce risk to children in a particular setting. There is a good deal of emphasis on health and safety and not so much on developmentally appropriate programming. In the quality systems, such as QRIS, accreditation, professional development, Environmental Rating Scales, CLASS, the philosophy is to do good, its emphasis is looking at all the positive aspects of a setting. There is a good deal of emphasis on improving the programming that the children are exposed to or increasing the skill set of teachers, or improving the overall environment or interaction that children are exposed to.

2) Closed system versus Open system. Licensing is basically a closed system. It has an upper limit with full compliance (100%) with all rules. The goal is to have all programs fully comply with all rules. However, the value of this assumption has been challenged over the years with the introduction of the Regulatory Compliance Theory of Diminishing Returns. With quality systems, they have a tendency to be more open and far reaching where attaining a perfect score is very difficult to come by. The majority of programs are more normally distributed where with licensing rules the majority of programs are skewed positively in either substantial or full compliance. It is far more difficult to distinguish between the really best programs and the mediocre programs within licensing but more successful in quality systems.

3) Rules versus Indicators/Best Practices. Licensing systems are based around specific standards/rules/regulations that either are in compliance or out of compliance. It is either a program is in compliance or out of compliance with the specific rule. With quality systems, there is more emphasis on indicators or best practices that are measured a bit more broadly and deal more with process than structure which is the case with licensing. It is the difference between hard and soft data as many legal counsels term it. There is greater flexibility in quality systems. With this said, if we can look at other service types, such as adult-residential services, there has been some limited success with blending structural and process elements but it still remains a measurement issue on the process side.

4) Nominal versus Ordinal measurement. Licensing systems are nominally based measurement systems. Either you are in compliance or out of compliance. Nothing in-between. It is either a yes or no response for each rule. No maybe or partial compliance. With quality systems, they are generally measured

on an ordinal level or a Likert scale. They may run from 1 to 3, or 1 to 5, or 1 to 7. There is more chances for variability in the data than in licensing which has 1 or 0 response. This increases the robustness of the data distribution with ordinal measurement.

5) Full or None versus Gradients or Gray Area. Building off of the fourth element, licensing scoring is either full or not. As suggested in the above elements, there is no in-between category, no gradient or gray area. This is definitely not the case with quality systems in which there are gradients and substantial gray areas. Each best practice can be measured on a Likert scale with subtle gradients in improving the overall practice.

6) Ceiling effect versus No Ceiling. With licensing there is definitely a ceiling effect because of the emphasis on full 100% compliance with all rules. That is the goal of a licensing program, to have full compliance. With quality systems, it is more open ended in which a ceiling effect is not present. Programs have many ways to attain excellence.

7) Gatekeeper versus Enabler: Licensing has always been called a gatekeeper system. It is the entry way to providing care, to providing services. It is a mandatory system in which all programs need to be licensed to operate. In Quality systems, these are voluntary systems. A program chooses to participate, there is no mandate to participate. It is more enabling for programs building upon successes. There are enhancements in many cases.

8) Risk versus Performance: Licensing systems are based upon mitigating or reducing risks to children when in out of home care. Quality systems are based upon performance and excellence where this is rewarded in their particular scoring by

the addition of a new Star level or a Digital Badge or an Accreditation Certificate.

9) Structural Quality versus Process Quality: when we think of structural quality, we generally think of things we can count easily, such as the number of children or teachers present in a classroom or the number of smoke alarms, etc. These are items that form the basis of rules within a licensing system. However, when we think of process quality, we generally think of things that are not as ease to measure, such as interactions between teachers and children that are warm and engaging. This is much more difficult to measure and generally not part of licensing systems but rather program quality tools, such as the ERS and CLASS tools.

10) Hard Data versus Soft Data: this dichotomy is similar to number 9 structure quality versus process quality but adds a small dimension not present in number 9. It deals with the ease in which legal counsels can defend a specific rule or standard in a court of law. Hard rules or standards are easy to measure while soft rules or standards are more difficult to measure or evaluate. Again, they fall along the continue of being structural versus process oriented as mentioned in 9 above.

There has been a great deal of discussion in the early care and education field about the relationship between licensing, accreditation, QRIS, professional development, and technical assistance. It is important as we continue this discussion to pay attention to the key elements and principles in how licensing and these quality systems are the same and different in their emphases and goals, and about the implications of particular program monitoring paradigms and measurement strategies. For other regulatory systems outside the human services field, the same type of model can be applied positioning compliance

and quality as a continuum one building off of the other because I feel that with the introduction of more quality into a regulatory context will help to ameliorate the ceiling and plateau effect of diminishing returns on performance and outcomes.

Chapter 5

Coordinated Program Monitoring, Differential Monitoring, Key Indicator, and Risk Assessment

This chapter demonstrates the national/federal initiatives addressing coordinated program monitoring. There are several excellent reports produced by the Administration for Children and Families (ACF), Office of Child Care (OCC), Office of Planning, Research and Evaluation (OPRE), Assistant Secretary's Office of Planning and Evaluation, and the Federal Department of Health and Human Services (HHS) which goes a long way in addressing this key issue. In any system where there are limited resources, we need to be as cost effective and efficient as possible. The handouts which accompany this text through the NARA Licensing Measurement course will provide you with many examples of how best to do this. These handouts/reports are all available of the RIKI and NARA websites as well as within the *NARA Licensing Curriculum*.

With a closed system and limited resources, a coordinated program monitoring system is critical to make certain that we have the necessary resources to effectively and efficiently protect the clients in the facilities we are mandated to license. The key term is "Do No Harm". The federal agency reports in this class will provide you with the parameters for building a program monitoring system that accomplishes this goal.

The lecture from the NARA licensing measurement course for this section of the chapter consists of a slide that builds upon *Caring for Our Children Basics (CFOCB*) and how that publication

came into existence. Personally, I think it is one of the most significant publications (*CFOCB*) related to early care and education (ECE) standards development that has ever been produced.

CFOCB provides voluntary standards for all ECE to follow. It is the very essence of what coordinated program monitoring is all about in providing basic safeguards for all children while in out of home care.

Differential Monitoring, Risk Assessment, and Key Indicators

This ehandbook text has gotten into the details of differential monitoring, risk assessment, and the key indicator methodologies. We have tangentially addressed these methodologies throughout the text, but this chapter provides the step-by-step process of their development and implementation (see the following paragraphs). Also, there are several other publications that deal with this detail on the RIKI and NARA Websites.

The first step in utilizing the DMLMA (Differential Monitoring Logic Model and Algorithm) 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 DMLMA 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. This is the first approach to validation which involves Standards review.

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. This is a continuation of the first approach to validation which involves Standards review.

The fourth step for the state is to compare the results from the CI with the RA tools. This step is the second approach to validation which involves Measures. The correlation between CI and RA should be at the .50 level or higher (.50+).

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. This step is the third approach to validation which involves Outputs. It would be expected that lower correlations (.30+) would be found between CI and PQ because these tools are measuring different aspects of quality such as health & safety versus caregiver-child interactions or overall classroom quality.

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) publications for a detailed explanation of the methodology for generating a KI tool. This step is also part

of the second approach to validation which involves Measures. The correlation between the CI and KI should be very high (.70+) because the KI is a subset of predictor rules taken from the CI data base. 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* – this publication is available on the RIKI website.

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 and continues the second approach to validation (Measures). Also, this step should drive decisions within the technical assistance/training/professional development (PD) system in what resources are allocated to a particular facility. It would be expected that moderate correlations (.50+) would be found amongst RA, KI, DM, and PD.

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 and Standards are developed, this will become more common place. This step is the fourth approach to validation which involves Outcomes. The correlations between CI, PQ, RA, KI and CO will be on the lower end (.30+) because there are so many other variables that impact children's development other than child care facilities.

Key Element Definitions: 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. 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.

Validation is a continuous approach and is not a once and done process. States should look at their monitoring systems on an on-going basis and make the necessary adjustments as data are collected and compared in order to keep program monitoring as cost effective and efficient.

In the readings/handouts, the learner will find several report examples which provide the details of the various methodologies. There are more than enough examples, so pick the ones you are most interested in seeing. For those of you who would like to see more, please go to the RIKI website and look under the report's webpage for additional examples.

Chapter 6

What Research Tells Us, What We Don't Know, and Examples

This ehandbook text has summarized what we know from the research literature about licensing measurement. There have been several advances in licensing measurement over the past couple of decades. Clearly the Regulatory Compliance Theory of Diminishing Returns has taken hold of policy development in licensing and regulatory administration. We have seen statutes change from requiring full 100% compliance in order to receive a license to operate to statutes that are requiring substantial regulatory compliance with all rules rather than full 100% compliance. Getting to those right rules rather than more or less rules. *Caring for Our Children: Basics* is an excellent example of this approach.

Licensing key indicators and risk assessment rules are being used on a much larger scale as the differential monitoring/targeted monitoring approach has expanded. The latest Licensing Study conducted by NARA and the National Center for Early Childhood Program Quality has demonstrated that the majority of states are using one of these approaches.

The differential monitoring approach and its respective methodologies have gone through many enhancements in dealing with measurement and statistical nuances related to licensing data distributions, such as severe skewness, kurtosis, dichotomization of data groups, eliminating false negatives, limitations of nominal data analysis, moving from a nominal Measurement scale to an ordinal measurement scale, identifying generic licensing key indicators, and the relationship

between regulatory compliance & program quality (Chapters 3 & 4 highlighted this).

All these above enhancements are basically dealt with and addressed in the *RIKI Technical Research Notes* found in the *ECPQIM/DMLMA text* as well as on the RIKI website Blog/Notes Page (https://RIKInstitute.com/blog/). The interested reader will find all these technical research notes in one of those venues. Just look towards the end of the webpage to find the research notes.

What Research Doesn't Tell Us

So, what are the gaps in the research related to licensing measurement that licensing researchers and regulatory scientists should be paying attention to? This text has provided some of the key gaps that have been identified to date. One area for further research is the relationship between regulatory compliance and outcomes for clients. Are clients healthier and safer in highly compliant programs? Are we seeing fewer injuries in those programs of high regulatory compliance? This is a critical question that still needs definitive research and empirical evidence to confirm.

There still needs to be additional research that continues to validate the rules/standards selected, the measures themselves, and the relationship between regulatory compliance and QRIS systems. There has been considerable movement in the past decade with validation studies being completed in many states and provinces and this trend needs to continue. The results to date definitely appear to validate all these respective components in that they are working as expected, but I would feel more confident with additional replication studies being completed.

International, National, and State Examples

This section provides us with examples mainly through the specific tools that have been designed by different jurisdictions for the differential monitoring, key indicator and risk assessment methodologies described in this text. The readings and handouts provide many such examples which are available at https://RIKInstitute.com. You will find examples both from the USA as well as Canada. The methodologies have really taken off in the last decade as demonstrated by the number of contracts NARA has entered into with states and provinces throughout the United States (Montana, Michigan, Illinois, Indiana, Kansas, Florida, New York, Minnesota, California) and Canada (British Columbia, Alberta, Saskatchewan). Reports written describing these efforts are available on both the RIKI and NARA websites.

All of these jurisdictions have demonstrated a certain consistency when it comes to licensing key indicator predictor rules and risk assessment rules. There are common themes that have emerged over the past 4 decades. You will witness this consistency in the readings you have access to at https://RIKInstitute.com. Please check out the website because there are numerous publications and reports available to you. All the publications are in the public domain, so you are free to download them as you see fit.

The plan is to continue validating the methodologies to make certain that they are keeping children healthy and safe and are doing no harm. That is the key element of licensing

measurement with a focus on health and safety similar to the approach taken by the Nuclear Regulatory Commission (NRC) in keeping surrounding communities safe where nuclear power plants are located.

As has been repeatedly demonstrated in this ehandbook text, there is a delicate balance between regulatory compliance and program quality (remember chapter 4). Some industries are more geared towards the health and safety side of the equation while others seek a more balanced approach of regulatory compliance and program quality. I have attempted to address both in this text and hopefully have done an equally balanced approach in addressing both sides of the equation. It will be interesting to see how things play out as regulatory science continues to grow as a science and the impact of licensing measurement on the development of this very important science.

Chapter 7

Future Directions/Next Steps

This last chapter deals with where do we go from here. What are the next steps for licensing measurement. How do we combine the quantitative and the qualitative? How do we have a mixed methods approach? How do we combine the best aspects of regulatory compliance with program quality elements? Are there more effective ways to deal with terribly skewed data other than dichotomization? Does it make sense to move from a nominal to an ordinal measurement scale with regulatory compliance? All these are critical questions for the field of regulatory science and its accompanying licensing measurement. If we are truly going to build a science, we need to spend the requisite time on developing and implementing a solid scientific measurement strategy that is both reliable and valid.

This short ehandbook text is a first step in providing that scientific base for building a sound regulatory science, but I am hopeful that other licensing researchers and regulatory scientists build upon what has been presented and suggested in this eBook.

For those interested in pursuing any of these topics, please don't hesitate to go to the RIKI Institute or the NARA websites for additional detailed information. Here are the pertinent websites for your ease of access: https://rikinstitute.com or https://www.naralicensing.org/key-indicators.

Research has been going on for approximately 50 years when the first kernels of what a regional model for monitoring would

look like. I never thought it would lead to its own statistical methodologies and altering how licensing and monitoring decision making would occur. And definitely did not think that "differential monitoring" would be referenced in Federal legislation with the re-authorization of CCDBG.

As I said earlier, the purpose of this ehandbook was as a short guide for those in the regulatory science and licensing research arenas to get a basic understanding of licensing measurement and program monitoring. By starting with it and using it in conjunction with all the publications and materials on the RIKI and NARA websites as well as the NARA Licensing Measurement course, it will provide an introduction to the state of the art regarding licensing measurement.

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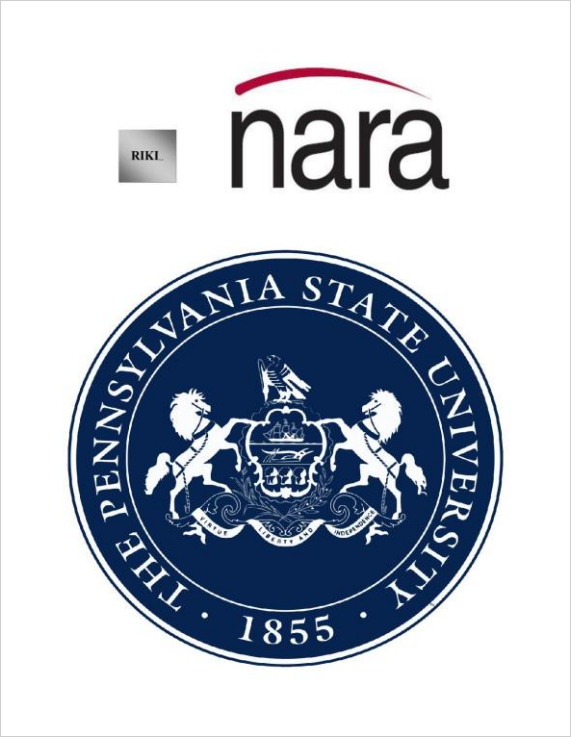
About the Author:

After a long career in governmental service and academia, mostly in Pennsylvania; and consulting, nationally and internationally, Dr Rick Fiene continues to write and research about regulatory science topics (such as measurement, instrument development, math & statistical modeling, differential monitoring, risk assessment, key performance indicators) as they related to early care and education, the human services, and has been delving into other social sciences as well.

https://www.prevention.psu.edu/people/fiene-richard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