blogbook

RIKI - Research Institute for Key Indicators LLC

RIKINOTES

REGULATORY SCIENCE AND MONITORING

by

Dr Richard Fiene

RIKINotes

Regulatory Science and Monitoring

Dr Richard Fiene

http://rikinstitute.com

Foreword
RIKINotes

This book contains ***RIKINotes Blog Posts***. The majority of the posts contain research into differential monitoring, regulatory compliance theory of diminishing returns, key risk indicators, licensing and regulatory science measurement topics. The Research Institute for Key Indicators is in strategic partnership with the National Association for Regulatory Administration. This book contains many URLs which can be reached by going to the original **RIKINotes Blog** located at **https://rikinstitute.com**. Or please reach out to Dr Fiene at **rfiene@rikinstitute.com**, or **rfiene@naralicensing.org**.

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March 2013

RIKI Introduction/ Main Page

Tuesday 19 *March*, 2013

RIKI – Research Institute for Key Indicators LLC, directed by Dr Richard Fiene, Research Psychologist, Regulatory Scientist, and Retired Professor of Psychology and Human Development, Penn State University, focus is to improve the quality of early care and education programs nationally and internationally through an empirically based Child Care Indicator (Child Care Indicator) methodology, and to improve the measurement and monitoring strategies for regulatory science. RIKILLC is a research institute for the study of regulatory science as it pertains to the human services and in other industries, such as banking, economic theory, transportation, energy, nuclear, etc.

What are the key indicators that distinguish high quality programs? It is not about finding more or less rules/regulations/standards, it is about finding the "right" rules/regulations/standards that help produce positive outcomes for children (Theory of Regulatory Compliance)(Regulatory Compliance)(Journal of Regulatory Science). *"Washing your hands will help in the prevention of the spread of infectious diseases but will not create a high quality program; and using the 'creative curriculum' will help children developmentally but it will not protect children from injuries"*.

And then it is building and implementing data driven/empirically based program monitoring systems that reflect this knowledge in order to determine the most cost effective and efficient approach which led to the differential/targeted/inferential monitoring approach (Theory of Regulatory Compliance (TRC) Monitoring Paradigms Key Elements)(Regulatory Compliance and Quality Differences)(Journal of Regulatory Science). Although the theory and model were developed within the early care and education field, its applicability transfers easily to all other human services, social regulations, and regulatory science in general. Another way of thinking of it is similar to Steve Jobs' "30% Rule"!

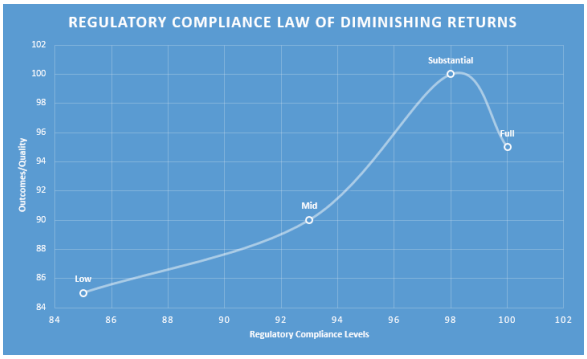
The bottom line with the *Regulatory Compliance Theory of Diminishing Returns* (see figure below) is that the fully compliant programs are not necessarily the best programs when it comes to quality. Or another way of putting it is that many of the best programs are not in full compliance with all rules but rather are in substantial com-

pliance with all rules. This has tremendous public policy implications and if it is true beyond the early care and education field, it has implications for all human services and for all regulatory science. Full 100% compliance (theoretically attempting to attain "no risk") with all regulations just may not be the best public policy when it comes to assessing regulatory compliance in any field or industry. Pursuing this goal of full compliance (100% = no risk) with all rules could be counterproductive for building a high quality delivery system. The methodologies presented here will help to mitigate this potential harmful effect and offer further protections for individuals, such as full compliance always with certain predictive rules or high risk rules.

So what does this mean for the licensing/regulatory compliance field in general. Licensing is considered a gatekeeper function which essentially means a facility must meet certain rules in order to enter the playing field and must maintain those rules in order to remain on the playing field. Based upon research done in licensing, this gatekeeper function works very well in distinguishing between the low performers and the high performers; however, licensing does not work very well in distinguishing between the mediocre performers and the high performers, the best of the best. Based upon the *Regulatory Compliance Theory of Diminishing Returns* ceiling effect, the gatekeeper function does not work as well at the upper end of regulatory compliance which would include substantial and fully compliant programs. It works well at the lower end but not at the upper end of the regulatory compliance continuum. And the question remains, is this result pertinent only to human services regulatory administration/compliance or is this result more generalizable to skewed data and closed systems which demonstrate a ceiling effect.

The Key Indicator methodology created by Dr Fiene in the 1970's which resulted in an *Early Childhood Program Quality Improvement & Indicator Model (RIKI ECPQIM-DMLMA Book of Readings)* and the implementation of a differential monitoring methodology has gone through five generations/editions from 1975 through to 2022. The ECPQIM's key components/elements in improving child care quality are through an early childhood program quality indicator model of training, technical assistance, quality rating & improvement systems, professional development, mentoring, licensing, regulatory science, risk assessment, differential/targeted/inferential program monitoring, and accreditation. Here is a tool based upon the ECPQIM compliance and quality key indicators being developed with the assistance of the Saskatchewan Ministry of Education (*ECPQIM Tool).*

Most recently, Dr Fiene has applied a validation framework to ECPQIM, see the following anthology which ties the theory, model, framework and results together (*TRC ECPQIM VAL DM)(Please see the Publications Page on this Website for additional information and the papers constituting this anthology)*. Rigorous validation studies were completed in 2019-2020 clearly demonstrating the reliability and validity of ECPQIM (Please go to the NARA website to learn more about these validation studies (NARA Key Indicator Studies))



If interested in any of the publications or links on this website, please contact RIKILLC by emailing RFiene@RIKInstitute.com or go to one of the major research engines, such as Google Scholar or go to the Publications Page on this website for selected publications that can be downloaded. Also, take a look at the RIKINotes blog which contains posts related to licensing measurement & systems, differential monitoring, and regulatory compliance key concepts.

Richard Fiene, Ph.D., Research Psychologist (Bio)

Dr. Fiene has spent his professional career in improving the quality of child care in Pennsylvania, nationally, and internationally. He has done extensive research and publishing on the key components in improving child care quality through an *Early Childhood Program Quality Improvement & Indicator Model* ***(Fiene ECPQIM Slides (PPT153N))*** *of training, technical assistance, mentoring, regulatory science, licensing, monitoring, and accreditation.* Supporting ECPQIM is the following Anthology of articles providing the background research to the model (***ECPQIM Anthology of Articles***). The child care models that he developed in the 1970s and 1980s have been used in the majority of states to improve their licensing/regulatory systems and were the precursors to the development of quality rating systems. *A Parent's Guide to Choosing Safe and Healthy Child Care* published by the Federal Department of Health and Human Services and used by the National Resource Center for Health and Safety in Child Care is based upon *13 Indicators of Child Care Quality (the Fiene Key Indicators)* and has been used as a checklist by parents nationally to select child care *(Parents Guide Checklist).* This checklist was highlighted in a *Parade Magazine article (7/19/09) The New Push For Quality Child Care.* In addition, the *Fiene Key Indicators* have been used as part of *NACCRRA's Report Card on Child Care Quality: We CAN Do Better;* state's licensing and monitoring systems; and *Caring for Our Children: Basics and Stepping Stones to Caring for Our Children.*

In addition to Dr Fiene's academic appointments at the University of North Carolina at Greensboro and the Pennsylvania State University as a professor of human development and psychology, he has been a Special Assistant to both the Deputy Secretary for the Office of Children, Youth and Families and the Secretary of Public Welfare during the 1990's in which he was the Research Director and Policy Analyst for the

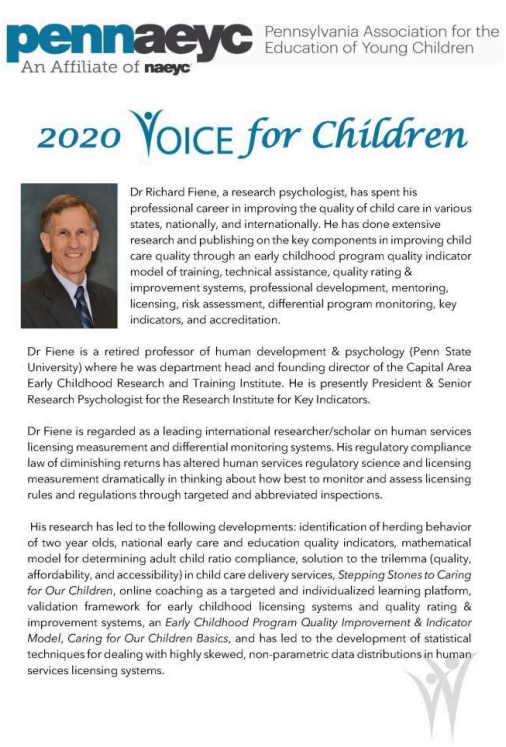
development of the licensing and training systems in the Department of Public Welfare (now the Department of Human Services) for the Commonwealth of Pennsylvania. He was the first director of research for the Office of Human Services Licensing in the Commonwealth of Pennsylvania. He also was part of the statewide committee that developed the original standards for the Pennsylvania QRIS Keystone STARS program and the original designer of the CCECD – Child Care and Early Childhood Development training system. In the development of the CCECD training system, he provided the initial funding for Better Kid Care an innovative national on-line training delivery system. He developed and implemented an early childhood program certificate series at Penn State Harrisburg which blossomed into the present day early childhood certification program. He co-founded the Pennsylvania Chapter of the American Academy of Pediatrics Early Childhood Education Linkage System (ECELS) with Dr Susan Aronson; he was the founding director of CAECTI – Capital Area Early Childhood Training and Research Institute (CAHHDI Five-Year Report) at Penn State University with Dr Mark Greenberg, Director of the Prevention Research Center (PRC Five-Year Report)(PRC Ten Year Report); and helped to bring TEACH to Pennsylvania. Dr Fiene is a past Fellow of the Pennsylvania Psychological Association, a past Member of the American Psychological Association, Eastern Psychological Association, American Association of University Professors, National Association for the Education of Young Children, Society for Research in Child Development, American Educational Research Association, and one of the founders of the University-Based Child and Family Policy Consortium. He has been an expert reviewer for *Early Childhood Research Quarterly, Young Children, Child Care Quarterly, Child and Youth Forum*; and for Prentice & Hall, MacMillian, and Random House Early Childhood Series. Dr Fiene has also been either interviewed for stories in the following newspapers and television regarding his research studies: Boston Globe, USAToday, NBC News, WGAL, and other news outlets.

Dr Fiene started his career in the early 1970's directing one of the first national infant toddler demonstration centers in the US. His early research led to the development of the ***Child Development Program Evaluation Scale (CDPES)*** which influenced the future development of differential monitoring, and identifying herding/clustering behavior in two-year old developmental play patterns, and most recently proposed an innovative approach to how children acquire their concepts of space and time through the development of a Spatial Acquisition Device (SAD) similar to Noam Chomsky's Language Acquisition Device. Dr Fiene has been a consultant to **Zero to Three**; served on the National Review Panel of the **Program for Infant Toddler Caregivers** with T. Berry Brazelton, Laura Dittman, Magda Gerber, Asa Hilliard, Alice Honig, Jeree Pawl, Ron Lally, and Sally Provence (pictured below); was one of the original national commissioners for **NAEYC's Accreditation System;** and a member of the **Pennsylvania Early Childhood Task Force** Research Team (researchers from Penn State, Temple, & University of Pittsburgh) created by Governor Richard Schweiker and Co-Chaired by Honorary Chairperson Fred Rogers (pictured below). And most recently he is a member of the **Office of Child Care's National Center for Early Childhood Quality Assurance's Licensing Expert Panel** and Licensing Research Work Group and the **Office of Head Start's National Center for Early Childhood Health and Wellness** COVID19 Early Childhood Expert Panel.

Dr Fiene's education include a BA in early childhood/elementary education and an MA and PhD in developmental psychology. Dr Fiene graduated with a Regents Diploma, was a ***Regents Scholar*** and received a **Scholar Incentive Award** while at SUNY Stony Brook (Stony Brook University) and is Certified in Early Childhood Education in New York state (Phi Delta Kappa, Kappa Delta Pi). He continues taking CE courses in research methodology, regulatory science and is CITI Certified **(ID#:5527822)(Biomedical Certificate1) (Clinical Practice Certificate1)(Biomedical Certificate2)(Clinical Practice Certificate2)(IBM Statistics Certificate)(RJF/PSU Scientist Certificate)** as a research psychologist/investigator and regulatory scientist; and continues his affiliation with Penn State as an affiliate professor at the Prevention Research Center, Penn State University and research consultant at Penn State Hershey – College of Medicine.

Dr Fiene has received several awards during his career including, being chosen by the ***Exchange Leadership Initiative*** (***Exchange Leadership Initiative Article)(The Exchange Leaders Website Link)*** to join the 300 Early Childhood Exchange Leaders from around the world; the National Association for Regulatory Administration's ***President's Award (Contributions)*** for contributions to regulatory administration and science, in particular his theory of regulatory compliance, differential monitoring, licensing key indicators and risk assessment rules methodologies; nominated for ***Research/Scholarly Activity Award*** and received the ***Academic Advising Award*** at Penn State Harrisburg; Pennsylvania Children, Youth, and Families Governmental **Innovation Award**; his research led to a Provincial Award in Ontario for their Tiered Licensing System; Capital Area Association for the Education of Young Children ***Golden Apple Award;*** Pennsylvania Association for the Education of Young Children ***VOICE for Children Distinguished Career Award (VOICE-BIO-Dr. -Fiene) (PennAEYC Website Award Notification);*** listed on **AD Scientific Index** (Richard Fiene Scientist.php), and the ***Albert Nelson Marquis Lifetime Achievement Award and the Who's Who of Science and Engineering.*** He continues to be a member (retired) of the Association for Psychological Science/formerly American Psychological Society (Year of Election: 1997) as a research psychologist and a member of The Trust Practice and Risk Management Association as a research psychologist and regulatory scientist. Member of ***Sigma Xi, Scientific Research Honor Society*** (Nominated and Year of Election: 2022)(Sigma Xi Certificate)(Sigma Xi Membership); Member of the Royal Meteorological Society (Year of Election: 2022); Associate of the American Meteorological Society (2022).

SIGMA XI
THE SCIENTIFIC RESEARCH HONOR SOCIETY



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2020 VOICE for Children

Dr Richard Fiene, a research psychologist, has spent his professional career in improving the quality of child care in various states, nationally, and internationally. He has done extensive research and publishing on the key components in improving child care quality through an early childhood program quality indicator model of training, technical assistance, quality rating & improvement systems, professional development, mentoring, licensing, risk assessment, differential program monitoring, key indicators, and accreditation.

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 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 olds, 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.

Over the past 50 years, Dr Fiene's research and publications have helped states develop and improve their child care licensing systems to more clearly focus on the key factors in developing high quality child care programs (his research has been disseminated to all 50 states and over 120 countries). His key indicator and weighting methodologies developed in the 1970's have led to the development and implementation of risk assessment, differential monitoring, and abbreviated inspections in the regulatory administration field; have been highlighted in three major national publications by the Assistant Secretary's Office of Planning and Evaluation (ASPE), Department of Health and Human Services (HHS) & United States Department of Agriculture (USDA), and the Office of Children Care (OCC): the *ASPE white paper (Innovation in Monitoring ECE Programs)(ASPE ECE Monitoring Paper)(ASPE ECE Monitoring Summary), HHS/USDA Joint Monitoring Statement (Final HHS USDA Joint Monitoring Policy Statement)* and the *OCC licensing brief (Monitoring Strategies for Determining Compliance (OCC Differential Monitoring)*); and are part of the ***NARA Licensing Curriculum.*** Most recently Dr Fiene's research while at CAECTI related to his mentoring/coaching program was highlighted as a compelling model in the *ASPE/LITES Compelling Models Report (LITEScompelling)* and his differential monitoring approach was highlighted in the *OPRE/Child Trends' Coordinated Monitoring Systems in Early Care and Education Report.* In 2016, the Province of Ontario's Ministry of Education Tiered Licensing System based upon Dr Fiene's key indicator and risk assessment methodologies received a governmental innovation award. And in 2017, BUILD, the National Center for Early Childhood Quality Assurance (NCECQA), and the National Association for Regulatory Administration collaborated on a series of webinars (The Webinar Series: OCC Website) with 10 states to more efficiently and effectively monitor licensing; and the development of a National Standards Crosswalk Tool by NCECQA.

His key indicator and weighting methodologies have led to the development of *Stepping Stones to Caring for Our Children, the National Early Childhood Program Accreditation system, Head Start Differential Monitoring and Key Indicators,* ***Caring for Our Children-Basics****, Thirteen Key Indicators to Quality Child Care (considered the Gold Standard in the early childhood regulatory field), Child Development Program Evaluation Scale (CDPES), cited in the Child Care Development and Block Grant Legislation, and the Cruise to Quality Child Care Standards for the cruise line industry as adapted by CLIA*.

In 2013, Dr Fiene created **RIKI – Research Institute for Key Indicators LLC *(2020 Promise ECE Innovation)*** in order to consolidate all research development into a single research institute. All Dr Fiene's previous research became part of the new institute specifically designed to further develop his human service licensing and program monitoring methodologies and systems. In 2016-17, **RIKI** has had the distinct honor to become a partner with **Results For America** as it relates to providing and sup-

porting empirical evidence for blue ribbon interventions – Invest in What Works Coalition Partners. In 2018, RIKI has had the opportunity to partner with the Early Childhood Innovations Network. And in 2020, RIKI has partnered with VIBE/FSL (VIBE/FSL/RIKI Research Team). Dr Fiene and RIKI also have had research collaborations with excellent teams in Washington, British Columbia, Saskatchewan, Ontario, and Indiana. He presently continues to work full-time at the research institute.

In 2015, RIKI and NARA (National Association for Regulatory Administration) entered into an exclusive partnership for the future development and implementation of differential monitoring, risk assessment and key indicators in which NARA will assume the intellectual property rights of these methodologies. Also please see the *NARA Key Indicator Systems Brochure, NARA Targeted Measurement Tools, NARA Key Indicator Webpage, NARA 2017 Licensing Survey Report, and NARA Key Indicator Systems.*

For additional information, please contact Dr Fiene via the National Association for Regulatory Administration (NARA) regarding the regulatory compliance and program quality data contained in the Early Childhood Program Quality Improvement and Indicator/Differential Monitoring Data Base: *RFiene@NARALicensing.org*

Dr. Fiene recently updated the ***Licensing Measurement and Systems NARA Licensing Curriculum Course*** through the use of this website as part of *NARA's series on the Key Indicator System: Facilitated Dialogues with Dr Rick Fiene* (**NARA's KIS Facilitated Dialogues**). This link has registration information for signing up for the series.

After reviewing this webpage, the interested reader can go to the **NARA Key Indicators** webpage which provides detailed national and state reports in developing differential monitoring, key indicator and risk assessment systems.

Also, you may want to check out the eHandBook that Dr Fiene wrote on ***Licensing Measurement and Program Monitoring Systems (LMS eHandBook RFiene).***

LMS eHandBook RFiene 2ndc EdDownload
Here is a brief outline of the Course, ***Licensing Measurement and Systems/Key Indicator Systems: Facilitated Dialogues with Dr Rick Fiene***:

. ***Overview of Licensing Measurement & Systems***
. ***Conceptual/Theoretical Framework***
. ***Principles of Instrument Design***
. ***Measurement: Reliability and Validity***
. ***Regulatory Compliance and Program Quality***
. ***QRIS and other Quality Initiatives***
. ***Statistical Methods and Data Base Development***
. ***Coordinated Program Monitoring***
. ***Differential Monitoring and Key Indicators***
. ***What Research Tells Us***
. ***What Research Doesn't Tell Us: Unanswered Questions***
. ***National, International, and State Examples***
. ***Future Directions***

Here is an Overview to the Course:

Licensing Measurement Course Syllabus


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January 2016

Blog

Saturday 30 January, 2016

Here are the two versions of the ***RIKI Book of Readings for ECPQIM/DMLMA***:

1) Main Reports and Papers, 486 pages (15 MB). This research monograph/book of readings/ reports/papers contains the basic reports written during 2012-2016 related to ECPQIM/ DMLMA now in its 4th edition.

2) Main Reports, Papers, Technical Notes, Tools, & Powerpoint Slides, 694 pages (21 MB). This compilation contains all the basic reports but also contains the powerpoint slides, technical notes, tools, etc. written during 2012-16 related to ECPQIM/DMLMA.

Here are some other videos, webinars, power-point presentations, and other resources about program monitoring and ECPQIM:

- Differential Monitoring, Risk Assessment, Key Indicators 2013 – 2015 (https://www.youtube.com/watch?v=lR5qRryeCg4&feature=youtu.be)
- OCC: The Benefits of Monitoring 2015 (https://www.youtube.com/watch?v=sKHfrB-wssyQ&feature=em-share_video_user)
- STAM/OCC/ACF Plenary Session on Monitoring 2014 (http://www.acf.hhs.gov/programs/occ/resource/stam-2013-monitoring-plenary-highlights-part-i)
- Penn State Prevention Research Center Seminar Presentation on ECPQIM 2015 (http://live.libraries.psu.edu/Mediasite/Play/2ba6f8729ca54a09aa997963c591508c1d?catalog=8376d4b2-4dd1-457e-a3bf-e4cf9163feda)
- STAM 2015 Raising the Bar on Quality (https://childcareta.acf.hhs.gov/resource/july-stam-meeting#Raising-Quality-Bar)
- CCDF 2015 Webinar Video Protecting Health & Safety of Children in Child Care (https://www.youtube.com/watch?v=tcm8jPiFQq8)
- Caring for Our Children Basics 2015 (http://www.acf.hhs.gov/occ/resource/caring-for-our-children-basics-webinar)

I have had the distinct honor to become a member of the **National Center for Early Childhood Quality Assurance's Licensing Expert Panel** that they have convened. It is with great pleasure that I serve on this panel with 25 other national experts (Licensing Expert Panel Members) representing all the various components of an early care and education quality continuum.

The Federal Departments of Health and Human Services and the the United States Department of Agriculture recently put forth a joint monitoring statement which will have a significant impact on the overall quality of child care. Here is the overall link to the website and the specific joint policy statement:

- The HHS/USDA Joint Monitoring Statement Website
- The Joint Policy Statement

The RIKI Blog has posts regarding *Caring for Our Children Basics* (CFOCB) and its potential impact on the ECE field. I am taking a look at a few of

the standards and why they are so important to the ECE field in establishing a firm foundation to ECE health and safety for all children. I have geared the blog for parents to think about their own ECE arrangements and if it meets the standards as presented in CFOCB. I am really curious to see what I hear back from parents. (#6/7/9/11/12/13)

We can't underestimate the importance of CFOCB. I have said this in other venues that CFOCB is as important as Developmentally Appropriate Practices when it was first published. CFOCB is a game changer for the USA in that now we (ECE) actually have nationally voluntary standards for all ECE programs. This is a significant event.

Having been a state administrator, policy researcher and analyst for 25 years, I would suggest that present state administrators think about using CFOCB as the basis of any revision to their own state ECE rules/regulations as their core set of rules, and for their basic health & safety standards in the state's QRIS. CFOCB is based upon a solid research base developed over the past five decades. It is one of the best examples of combining the Key Indicator and Risk Assessment methodologies together.

My plan is to think through creative ways that CFOCB can be used by state agencies in helping to improve ECE in their respective jurisdictions. Those of you who know me, know that I have been at this for over 40 years in figuring out the best ways of improving ECE quality for all children. CFOCB is a first step for us. Hopefully, with QRIS we can build upon this solid foundation with CFOCB to really tackle ECE quality.

Please go to RIKInstitute.com to get the latest posts. All the posts are from *Caring for Our Children Basics* and *Caring for Our Children 3rd Edition*.

Here is a new resource from the National Center on Early Childhood Quality Assurance regarding new Briefs on Health and Safety Topics (NCECQA Health & Safety Briefs). I highly recommend these to parents and providers who are seeking child care or are working in child care. This is just another excellent example of the high quality, thoughtful resources being produced by the National Center.

Based upon 40+ years of research into identifying key licensing and quality indicators it is possible to distill this list of key indicators into three areas/factors when related to rules/regulations/standards. These three rule/regulatory/standard areas are the following:

. **A highly qualified ECE Director with a BA/MA in ECE.**

. **Highly qualified ECE Teachers with AA/BA in ECE.**

. **Parent Engagement similar to what we see in Head Start programs.**

These three areas have appeared consistently in key indicator lists when analyzing state licensing regulations and QRIS standards. In an ECE world with very limited resources, I would recommend that we focus our program monitoring on these three areas in order to efficiently and effectively increase the overall quality of ECE programs.

Another question asked many times is if there is a specific rule/regulation that stands out from all the key indicators, in other words, it shows up on every state's list or most state's lists. There is a rule/regulation that fits this threshold and it has to do with **children's immunizations.** For what ever reason, compliance with this rule/regulation appears to have the ability to consistently discriminate between the highly compliant ECE providers and those that have lower compliance. This is an area that needs additional exploration to determine in greater detail why this occurs. Presently a MCHB research project being undertaken by the Pennsylvania Chapter of the American Academy of Pediatrics ECELS (ECELS Report) will help to provide some answers to "why".

In addition to immunizations, the original thirteen key indicators that were identified in the 1985 *Child Care Quarterly* (1985 CCQ) article have not over the past three decades changed alot (STATE KI X 10KIf). There are fewer of them, **10 rather than 13** with group size and adult child ratio no longer on the list but it is interesting that these key indicators have stayed so constant for such a long time. And over the past three decades, many states have used the original 13 Key Indicators in designing their abbreviated inspections. Here is the original list of the 13 key indicators (Parents Guide Checklist) as published by the National Resource Center for Health and Safety in Child Care. For the convenience of the reader, I have listed the key indicators below, for a more detailed look at these, please use the publications listed above. Those listed with an asterisk (*) are inclusive of the CCDF health and safety national requirements. Those that are ***italicized*** appear approximately two-thirds of the time on state key indicator lists (Thirteen Key Indicators Technical Research Update). All ten requirements are contained within *Caring for Our Children Basics and Stepping Stones*.

. **Supervision of children**
. **Hand washing and diapering**
. **Director & teacher qualifications**
. ***Children's immunizations****
. ***Toxic substances are innaccessible****
. **Emergency plan***
. **Fire drills**
. **Child abuse prevention***
. **Medication administration***
. ***Staff training/first aid****

One last comment about using the key indicator methodology with different data sets, such as with accreditation or QRIS systems. The key indicator methodology has been also used with ECERS to see if it was possible to find a similar relationship between scoring very high on individual items and the overall score. Only one item (**Item 16 – Children Communicating**) achieved a perfect correlation (r = +1.00) in which it was always scored very highly with only those ECE programs that scored equally highly on the total ECERS score.

I have maintained a national ECPQIM data base where a portion of these data are available at http://rikinstitute.wikispaces.com in various SPSS data files of the key elements. For interested researchers, I have the full data base available for further analyses.

Dr. Fiene will continue his work in further developing the professional development, training and technical assistance key elements of ECPQIM through his collaborative work with the Pennsylvania Chapter of the American Academy of Pediatrics, ECELS – Early Childhood Education Linkage System's, Infant Toddler Program Quality Improvement Project; and the Penn State Hershey, College of Medicine, Center for the Protection of Children's iLookOut for Child Abuse Prevention Project.

He is also continuing his work in the further development of differential monitoring (Ontario Tiered Licensing)(*Realm Award for Innovation*) in Canada with the Province of Ontario's Ministry of Education. This project will provide a comprehensive implementation, evaluation, and validation strategy for those jurisdictions planning on undertaking differential monitoring, risk assessment or key indicator methodologies.

And of course, his continuing collaboration and partnership with NARA – National Association for Regulatory Administration where the further development and dissemination of differential monitoring, risk assessment and key indicator methodologies will continue into the future along with the Validation Studies for each of these methodologies.

The ECELS ITQIP is finishing up its three year MCHB funding and here is an initial draft of the reports that have been produced over the past several years. It begins with the results from the pre-test in order to establish equivalency of the intervention and control groups. This is followed by the results from the first post test comparing the intervention group to the control group and looking at change over time. The third report in the series presents the results from the second post test comparing the cross over effects and latent effects of the intervention and control groups. And lastly, is the tool/instrument used to collect the data for all three years of the study (ECELS ITQIP Reports). This study and project is particularly exciting because it clearly demonstrates the effectiveness of a child care health consultant mentoring/coaching model in impacting selected ***Caring for Our Children*** standards focused on infant and toddler programs. It also demonstrated that the intervention is effective in a cross over methodology as well as having latent/lasting effects. This study builds upon the original mentoring/coaching study conducted at the Penn State Capital Area Early Childhood Research and Training Institute/ Prevention Research Center in 2002 (CAECTI/ PRC Mentoring/Coaching Article).

This study also demonstrated the effectiveness of monitoring. Data taken from the number of hours CCHC (Child Care Health Consultants) spent in programs doing mentoring/coaching had a positive impact on improving compliance with the *Caring for Our Children* standards. But this result was geared more towards the higher compliant programs and the number of hours in mentoring/coaching was not at the high end of the spectrum. So it appears that just a little help goes a long way with the highest compliant programs. This is significant because with the push for differential monitoring and abbreviated inspections, having several short monitoring visits still helps a program to improve.

Speaking of Validation Studies, here are several reports on QRIS Validation that should help to guide the reader with a strategic framework for doing these types of studies:

- Early Childhood Research Quarterly Special Issue on QRIS Research
- QRIS Validation Framework
- QRIS Validation in Four States
- QRIS Validation Study Designs
- QRIS Validation of a Local Implementation
- QRIS Approaches to Validating Quality Rating & Improvement Systems
- QRIS Maine Evaluation Report
- QRIS Family Child Care
- QRIS RAND Validation Studies
- QRIS Studies & Outcomes
- QRIS and Coaching Quality Improvement
- QRIS Minnesota Parent-Aware-Validation Executive Summary
- QRIS Parent Aware Validation Report_Final
- QRIS Washington
- QRIS Validation Resources
- NAEYC Public Policy Report
- QRIS Keystone Stars Report
- South Carolina Childcare Initiatives
- QRIS Iowa
- QRIS Florida
- QRIS Wisconsin
- Rhode Island Quality Study

A couple of letters of support Appropriations Letter, DOE Letter, and DOE Letter1 for evidence based programs, regulations, and policies that **RIKI – Research Institute for Key Indicators** signed on to support.

An excellent presentation done by researchers from ASPE, Child Trends, and Georgia DECAL which presents the future of ECE monitoring.

A New Report from ASPE highlighting 13 compelling models for infant toddler early childhood services in which mentoring/coaching models are highlighted, including CAECTI's Infant-Toddler Caregiver Mentoring Program.

Interesting article on the impact of quality early care and education services (Child Encyclopedia Article).

Three reports regarding child care licensing in Canada, Accreditation, and good standards improving child care quality that I found very interesting.

- Child Care Licensing in Canada
- CCIE Accreditation
- Good Standards Improve Child Care Quality

These two reports demonstrate support for the Theory of Regulatory Compliance which depicts the relationship between program quality and licensing/regulatory compliance where higher licensing standards show a statistically significant relationship with program quality standards but lower licensing standards do not. Also, a plateau effect occurs when moving from substantial regulatory compliance to full regulatory compliance as it relates to program quality standards.

- Head Start Report
- Georgia Report

Because of this plateau effect, it ushered in the key indicator and risk assessment methodologies which are at the basis of abbreviated inspections and differential monitoring. The purpose of these methodologies is not to have less standards or rules or regulations but rather to determine what are the "right" standards/rules/regulations that impact services the most because they statistically predict overall regulatory compliance or reduce harm or risk for morbidity or mortality.

Although the reports and examples are from early care and education, these methodologies are applicable to all human services (e.g., child and adult residential services, etc.) and probably to other regulatory areas outside of the human services arena.

Theory of Regulatory Compliance (**DOI:** 10.13140/RG.2.2.34971.67360)

Recently Georgia DECAL revised their enforcement and compliance policy which demonstrates one of the better examples of a risk asssessment system. Here is the link to their work (http://decal.ga.gov/CCS/Enforcement-CompliancePolicy.aspx). And here is a presentation for providers (Licensing Enforcement Compliance – May2015)

Here is a discussion I started within NARA (National Association for Regulatory Administration) about regulatory compliance data limitations and potential solutions:

I'd like to start a discussion about the nature of regulatory compliance/licensing data and the implications related to measurement. As a research psychologist who has spent his total professional career examining the impact of regulatory compliance policies on children and families, the issues related to measurement and program monitoring have always been at the forefront of my research studies. I have found regulatory compliance/licensing data to have many limitations when it comes to measurement and analysis because the data are severely skewed.

Why is this important? Generally in the social sciences, research psychologists deal with data that are more normally distributed with sufficient variance. However, licensing data are not and probably never will be close to being normally distributed. Actually, this is a good thing

from a public policy point of view. We don't want basic health and safety rules to be normally distributed; we want programs (as many as possible) to be in compliance with these basic health and safety rules. And this is usually what happens. But from a measurement standpoint, it creates difficulties in analyzing the data.

By having severely skewed data, it is difficult at times to distinguish amongst the data between mediocre programs and either higher performers or lower performers because there isn't sufficient variance/separation in their scores. When I first noticed this, I suggested the use of weights attached to each rule in order to increase the variance in the data. This helps but is not sufficient in increasing the variance in the data. Unfortunately, this will always be a shortcoming of licensing data.

I point out this above limitation for future researchers who will be dealing with licensing data so that they can be aware of this but also to look at other statistical solutions to this problem and as a discussion point within NARA with other members to be aware.

I started a discussion earlier this morning (the above post) in which I presented some issues with regulatory compliance/licensing data. I don't like bringing up issues or problems without at least proposing some solutions. So here are some solutions to this problem regarding licensing data skewness.

One way is through weighting (I suggested this in my earlier post so let me expand here) which I have advocated for that introduces more variance in the data. This helps and is the basis for risk assessment systems but it can only go so far because it is really a statistical manipulation where we are saying that all regulations are not created nor administered equally. There are some regulations/rules that are more important than others; in other words, there are particular regulations/rules which reduce the potential risk of morbidity/mortality to clients if complied with.

Another potential solution, which I have observed in Pre-K programs, is the introduction of higher standards and their resulting influence on licensing compliance in general. This may be a more effective way to deal with the problem with skewness in data. If the data become more normally distributed because the standards are more stringent, this is a good thing. I think with Pre-K standards being utilized in more states and the advent of *Caring for Our Children Basics* that we may see a change in data distributions.

A complementary issue that probably is a result of the skewness of data has to do with the non-linear relationship between regulatory compliance and program quality. I have termed this relationship, Theory of Regulatory Compliance. This relationship I first observed in Pennsylvania in the late 1970's in early care and education (ECE) programs. I have continued to find this relationship between regulatory compliance and program quality data which is unsettling from a public policy standpoint. As a public policy administrator one expects that quality increases with higher levels of regulatory compliance, right. But this non-linear relationship doesn't support this conclusion – some of the highest quality programs are in substantial but not full regulatory compliance. I have suggested that higher licensing standards may eliminate this plateau effect when a high quality Pre-K program is introduced in a state ECE delivery system.

It was because of this non-linear relationship between regulatory compliance and program quality that ushered in the introduction of licensing key indicators and risk assessment systems in attempting to make inspection visits more efficient and effective by balancing program monitoring with quality initiatives.

These results are from the ECE research literature base but I strongly feel that these findings are applicable throughout the human services field and possibly beyond into any regulatory environment, such as banking or environmental

regulations, to name a couple of different venues. This is more about finding the *"right"* regulations to monitor rather than finding *"fewer or more"* regulations to monitor. By utilizing a risk assessment/key indicator approach, this could be a solution to the deregulatory paradox.

For the interested reader, many of my reports which highlight the results above can be found at http://RIKInstitute.com/ecpqim

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Here is another discussion question that I have been giving a great deal of thought to in how the key indicator methodology can be used. Generally, in the past, it has been based upon the compliance history (CI) for a specific provider. Very high regulatory compliance makes a program eligible for the use of an abbreviated key indicator inspection (KI). Very low regulatory compliance disqualifies a program for the use of an abbreviated key indicator inspection and generally leads to a more comprehensive full review of all rules (CI).

But there is another way to use the key indicator methodology. It could be used as a screener where every provider in a state receives the abbreviated key indicator inspection (KI) and based upon the results (compliance with all the key indicators) either the program gets another abbreviated inspection (KI) the following year or it moves to a more comprehensive full review (CI) if non-compliance is found with any of the key indicators.

In summary form, it would look something like this:

Compliance History data (CI) –> If high, key indicator inspection (KI), or if low, full comprehensive review (CI). (CI –> KI or CI).

Key Indicator as screener (KI) –> If high, key indicator inspection next year (KI), or if low, a full comprehensive review (CI). (KI –> KI or CI).

The advantage with the screener approach is that all providers from the beginning get a chance to be measured via key indicators. This could be looked upon by providers as initially more equitable in the application of key indicators. Something to think about as we move forward in the future development of the key indicator methodology.

NARA Newslink Blog of the Month – Key Indicators, by Dr. Rick Fiene.

We often get asked….'What exactly are Key Indicators?' and 'Why should my state agency be interested'? This month, Dr. Rick Fiene, the creator of The Key Indicator Methodology has posted a blog to answer those questions. Read today and post your comments. And if your interest has been peaked, join the ***Key Indicator Circle*** – a be a part of the NARA community.

NARA has recently created a Key Indicator webpage (http://www.naralicensing.org/key-indicators) that should help state licensing administrators get additional information about differential monitoring, risk assessment, and key indicator systems. I would highly recommend anyone who is interested to check out the new website. It is listed under the NARA Resources Folder on the Menu, just click on Key Indicators.

Here is a pdf of the page which compiles the various reports and studies listed on the NARA webpage (NARA Key Indicator Reports & Studies Examples from Webpage).

RIKI – Research Institute for Key Indicators (http://RIKInstitute.com) has joined a select group of organizations in a strategic partnership with NARA – National Association for Regulatory Administration. Here is the statement on NARA's website:

Strategic Partnerships

NARA has developed a broad spectrum of strategic relationships that provide access to the most up-to-date information on child care and child welfare regulations at both the federal and state levels. NARA's collaborative relationships with

agencies and advocacy organizations include:

- Collaborative Relationships within the Administration for Children & Families (ACF), Office of Child Care
- National Center for Early Childhood Quality Assurance (NCECQA)
- Children's Environmental Health Network
- Childcare Exchange
- The National Resource Center for Health and Safety in Child Care and Early Education (NRC)
- Generations United
- Annie E. Casey Foundation
- American Bar Association
- RIKI Institute

For more information, please email collaborations@naralicensing.org.

I recently updated the ***NARA Licensing Curriculum Licensing Measurement and Systems Course***. Here is a brief outline of the Course (Content (Webpage location)):

Licensing Measurement, Regulatory Compliance, and Program Monitoring Systems

Richard Fiene, Ph.D.

- ***Overview (ECPQIM/DMLMA & Publications)***
- ***Conceptual/Theoretical Framework (ECPQIM/DMLMA & Publications)***
- ***Principles of Instrument Design (RIKI Reports & Appendix)***
- ***Measurement: Reliability and Validity (RIKI Reports & Appendix)***
- ***Regulatory Compliance and Program Quality (ECPQIM/DMLMA)***
- ***QRIS and other Quality Initiatives (RIKI Blog)***
- ***Statistical Methods and Data Base Development (RIKI Reports & RIKI Blog)***
- ***Coordinated Program Monitoring, Evaluation, & Validation (National)***
- ***Differential Monitoring, Risk Assessment, Key Indicators (ECPQIM/DMLMA & RIKI Blog)***
- ***What Research Tells Us (Posters/Articles)***
- ***What Research Doesn't Tell Us: Unanswered Questions (RIKI Blog)***
- ***National, International, and State Examples (RIKI Reports, RIKI Blog & Appendix)***
- ***Future Directions (RIKI Blog)***
- Text Book: ***(RIKI ECPQIM-DMLMA Book of Readings)***
- Lectures: ***(RIKI/NARA ECPQIM/DMLMA Slides)***

Please contact Dr Fiene if you have questions or comments:**Rick Fiene, Affiliate Professor, Penn State Prevention Research Center at rjf8@psu.edu or *riki.institute@gmail.com or RFiene@NARALicensing.org***

Big news out of the Province of Ontario: the Child Care Quality Assurance and Licensing Branch within the Early Years Division won their Ontario's Ministry of Education Realm Award for Innovation for their Tiered Licensing System. The REALM Awards recognize excellence and achievement in the Ministry of Education and the Ministry of Training, Colleges and Universities (the Learning Ministries). Their Tiered Licensing System utilizes the Differential Monitoring, Key Indicator, and Risk Assessment Methodologies. What is so exciting about the Ontario Tiered Licensing System is that it uses both key indicators and risk assessment approaches for their differential monitoring system. Most jurisdictions use either key indicators or risk assessment but not both together. The Ontario approach provides a blueprint for combining the two methodologies together in the most cost effective and efficient differential monitoring

approach. The NARA Press Release: (nara-pressrelease-award 002).

Additional information about the award and project:

The **Prix REALM Awards** program formally recognizes Learning Ministries' (Ministry of Education and Ministry of Training, Colleges and Universities) staff for exceptional and outstanding contributions to:

- the services provided to Ontarians and/or,
- making the Learning Ministries a better place to work

This year outstanding achievements will be recognized in five award categories: Collaboration, Customer Service, Diversity and Inclusion, Innovation, Leadership and Lifetime Achievement

Won for Innovation:

Eligibility: Nominees in the category must have developed a new way of doing or thinking beneficial to a business process, program, initiative, or work environment.

About the project:

As part of the modernization of child care, Ontario's Ministry of Education has developed an innovative risk-based approach to child care licensing – tiered licensing. Tiered licensing is designed to maximize the effectiveness and efficiency of the licensing process by focusing ministry resources where it matters most – on centres that need help to achieve compliance and areas of highest risk to children's health and safety and importance to their learning and development – with the goal of improving regulatory compliance in all centres. Tiered licensing is built on best practices from across North America, a robust methodology and a cutting edge IT solution.

More details:

Ontario's Ministry of Education has developed an original, transformative and innovative risk-based approach to child care licensing called tiered licensing.

The tiered licensing approach has been designed in-house to maximize the effectiveness and efficiency of the licensing process with the goal of improving regulatory compliance and quality in all child care centres. Under this approach, ministry resources will be targeted to areas where they matter most – on centres that need extra support to come into compliance and on areas of highest risk to children's health and safety. At the same time, the approach will free up resources to provide more in-depth support in the important area of child development and wellbeing.

The ministry is transforming how child care licensing is performed in Ontario through tiered licensing by engaging the expertise of front line staff, Municipalities and licensees and integrating best practices from across North America to develop a robust new methodology and a cutting edge IT solution.

Ontario will be the first province in Canada to adopt a comprehensive risk-based approach for child care licensing and is now on the map as a North American leader in innovative regulatory practices. Dr. Richard Fiene, a leader in the field of regulatory administration for over four decades and a consultant on the project, has referred to Ontario's approach as a "blueprint that other jurisdictions should follow."

A Canadian Perspective Implementing Tiered Licensing in Ontario

NARA 40 years of Milestones:

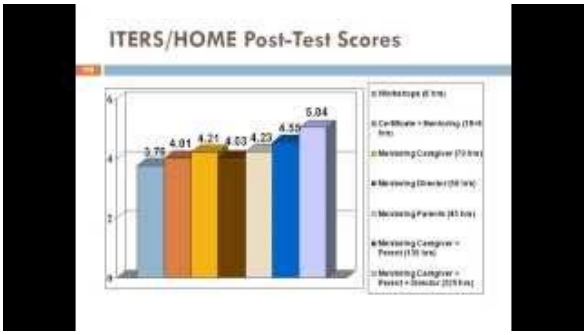
NARA Milestones

Maine is in the news for improvements to their child care licensing program. Please go to the following link (Maine Licensing System) to learn more.

Here is a powerpoint presentation for researchers and statisticians which has all the math and logic modeling for ECPQIM.

Math/Logic Modeling of ECPQIM

Here is a pdf of the latest powerpoint presentation which has an evaluation and validation study of differential monitoring, key indicators and risk assessment methodologies:



- PPT139 NARA-RIKI – Single slides per page (139 pages).
- PPT139 NARA-RIKI6 – Multiple slides per page (24 pages).
- ONTARIO Tiered Licensing System (6) – Multiple slides per page (30 pages).

RESEARCH INSTITUTE FOR KEY INDICATORS (RIKI) Contributions to the Human Services Field

- **Early Childhood Program Quality Improvement and Indicator Model**
- **Differential Monitoring Logic Model and Algorithm**
- **Clustering/Herding Behaviors of Two Year Olds**
- **Regulatory Policy based upon Clustering for Adult Child Ratios**
- **Mathematical Model for Computing Adult Child Ratios**
- **Child Development Program Evaluation Scale**
- **Theory of Regulatory Compliance**
- **Instrument Based Program Monitoring**
- **Human Service Program Differential Monitoring**
- **Licensing Weighting/Risk Assessment**
- **Licensing and Quality Key Indicators**
- **Human Service Provider Mentoring/ Coaching**

EARLY CHILDHOOD PROGRAM QUALITY IMPROVEMENT & INDICATOR MODEL (ECPQIM) KEY ELEMENTS (Publications)

- **The ECPQIM/DMLMA Model**
  - ***International Regulatory Compliance Comparisons – ICEP***
  - ***Licensing & Monitoring Publications – ASPE, OCC, CCQ, NARA, ZTT***
- **Program Compliance**
  - ***Caring for Our Children – NRC/AAP/APHA***
  - ***Instrument based Program Monitoring – CCQ***
- **Program Quality**
  - ***Keystone Stars Evaluation – OCD; Validation – OPRE***
  - ***Infant Toddler Mentoring Program – CYCF, ASPE***
  - ***National Early Childhood Program Accreditation – NECPA***
- **Program Compliance x Program Quality**
  - ***Theory of Regulatory Compliance – NEJHS***
  - ***Child Development Program Evaluation Scale – CCQ***
- **Risk Assessment**
  - ***Stepping Stones – NRC/AAP/APHA***
- **Key Indicators**
  - ***Thirteen Key Indicators of Quality Child Care – ASPE***
  - ***Head Start Key Indicators – OHS***

- **Risk Assessment x Key Indicators**
  - ***Caring for Our Children Basics – ACF***
- **Child Development Outcomes**
  - ***Quality in Child Care: What Does Research Tell Us? – NAEYC***

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1. **ECPQIM0: 1972 – 1974. Regional Model; EMIS (Fiene etal, 1975)*. This was the original conceptualization when I was a graduate student. (ECPQIM0/EMIS)**
2. **ECPQIM1: 1975 – 1994. Qualitative to Quantitative; focus on reliability; data utilization linking monitoring to training/ technical assistance systems; distinctions between program monitoring and evaluation; Key Indicators, Weighted Rules, & principles of licensing instrument design introduced. (Fiene, 1981; Fiene & Nixon, 1985). This is the original article written describing the model and suggesting the use of differential monitoring. (ECPQIM1/CCQ)**
3. **ECPQIM2: 1995 – 1999. Policy Evaluation and Regulatory Systems Planning added to model. (Griffin & Fiene, 1995). (ECPQIM2/ZTT)**
4. **ECPQIM3: 2000 – 2011. Inferential Inspections & Risk Assessment terminology added to the model. (Fiene & Kroh, 2000). (ECPQIM3/NARA)**
5. **ECPQIM4/4+: 2012 – present. Validation with expected Thresholds & Differential Monitoring formally added via a logic model and algorithm; Quality Indicators introduced. (Fiene, 2012, 2013b, 2015). (ECPQIM4/DMLMA)**

These are the various editions/versions of the Early Childhood Program Quality Improvement and Indicator Models (ECPQIM0–4+) that I developed while a graduate student and then improved upon the original design. All the citations can be found in the publications webpage which is part of this RIKI website.

The next section below contains the most recent examples of ECPQIM key elements. These are all projects actively going on presently (2016) in the Province of Ontario, Pennsylvania Chapter of the American Academy of Pediatrics, and the Penn State College of Medicine.

- ECPQIM1 DM, KI, RA Evaluation & Validation (Realm Award for Innovation)
- ECPQIM1 DM, RA, KI Technical Research Note
- ECPQIM2 PD Mentoring
- ECPQIM2 PD Mentoring/Coaching
- ECPQIM2 PD ECELS
- ECPQIM2 PD ITQIP
- ECPQIM3 PD Internet Training
- ECPQIM3 PD Internet Training Research Protocol

Here is a very important technical aspect of the Key Indicator Methodology that I want to share with researchers and statisticians. There are many different cut points or thresholds that can be used to determine the high group from the low group in constructing the 2 x 2 matrix for the phi coefficients (Φ **= *(a)(d) – (b)(c)/sqrt (w)(x)(y)(z))***. Ideally, ***(a)(d)*** should be much higher than ***(b)(c)***. In fact, ***(b)(c)*** should be as close to zero as possible. For example, the high regulatory compliance group ***(a)*** could only be those providers who attain 100% regulatory compliance with all rules/regulations. The low regulatory compliance group ***(d)*** could be those providers who attain 99% or lower regulatory compliance with all rules/regulations. Or the high group could be 100-99% regulatory compliance and the low group could be 95% or less regulatory compliance with all rules/regulations. In this approach the middle 50% of the data are not used. I have reported in a previous technical report that a top 25% and a bottom 25% of compliance history for programs was the most optimum cut points. It appears from two separate studies to test this hypothesis that this approach

does appear to be the most effective and efficient dichotomization of the regulatory compliance data.

A study completed in New York bears this out where various cut points/thresholds were used. Another study going on in Michigan (Centers, Family Homes, Group Homes) where various cut points/thresholds were used with the regulatory compliance data supports this contention as well.

For reaching me online, here are my email and website contacts at RIKI and NARA:

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http://www.naralicensing.org/key-indicators

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February 2016

RIKI & NARA PARTNERSHIP

Saturday 20 February, 2016

For all future research and development for differential monitoring, risk assessment and key indicator methodologies please go to the NARA – National Association for Regulatory Administration.

Dr Fiene pictured with Tara Orlowski, NARA President and Marcus Williams, NARA Executive Director

Please see the Press Release on the partnership between NARA and RIKI.*(NARA press release on NARA-RIKI partnership)*.

Also see the *NARA Key Indicator Systems Brochure which describes the key elements of Dr Fiene's methodology.*

Please go t0 the following webpage *http://RIKInstitute.com/blog* for a continuation and expansion of this blog. The several posts below highlight selected *CFOCB – Caring for Our Children Basics* standards for the interested reader.

October
2016

Latest RIKI Research related to ECPQIM and DMLMA

Tuesday 18 October, 2016

Here are some other videos, webinars, power-point presentations, and other resources about program monitoring and ECPQIM:

- Differential Monitoring, Risk Assessment, Key Indicators 2013 – 2015 (https://www.youtube.com/watch?v=lR5qRryeCg4&feature=youtu.be)
- OCC: The Benefits of Monitoring 2015 (https://www.youtube.com/watch?v=sKHfrB-wssyQ&feature=em-share_video_user)
- STAM/OCC/ACF Plenary Session on Monitoring 2014 (http://www.acf.hhs.gov/programs/occ/resource/stam-2013-monitoring-plenary-highlights-part-i)
- Penn State Prevention Research Center Seminar Presentation on ECPQIM 2015 (http://live.libraries.psu.edu/Mediasite/Play/2ba6f8729ca54a09aa997963c591508c1d?catalog=8376d4b2-4dd1-457e-a3bf-e4cf9163feda)
- STAM 2015 Raising the Bar on Quality (https://childcareta.acf.hhs.gov/resource/july-stam-meeting#Raising-Quality-Bar)
- CCDF 2015 Webinar Video Protecting Health & Safety of Children in Child Care (https://www.youtube.com/watch?v=tcm8jPiFQq8)
- Caring for Our Children Basics 2015 (http://www.acf.hhs.gov/occ/resource/caring-for-our-children-basics-webinar)

Here is a webinar (***Resources and Tools for Revising and Aligning Early Childhood Program Standards*** that was held on Wednesday,

Here are the two versions of the ***RIKI Book of Readings for ECPQIM/DMLMA***:

1) Main Reports and Papers, 486 pages (15 MB). This research monograph/book of readings/reports/papers contains the basic reports written during 2012-2016 related to ECPQIM/DMLMA now in its 4th edition.

2) Main Reports, Papers, Technical Notes, Tools, & Powerpoint Slides, 694 pages (21 MB). This compilation contains all the basic reports but also contains the powerpoint slides, technical notes, tools, etc. written during 2012-16 related to ECPQIM/DMLMA.

January 11, 2017) conducted by the **National Center for Early Childhood Quality Assurance** on health and safety resources that will be useful to state administrators:

- Health Safety Resources Webinar Slides
- Webinar Recording

I have had the distinct honor to become a member of the **National Center for Early Childhood Quality Assurance's Licensing Expert Panel** that they have convened. It is with great pleasure that I serve on this panel with 25 other national experts (Licensing Expert Panel Members) representing all the various components of an early care and education quality continuum.

- Monitoring Powerpoint

I have also had the distinct honor to be asked again to serve as a member of the **National Head Start Association's Task Force on Monitoring (NHSA Monitoring Task Force)**. Here is the NHSA Task Force Report on Monitoring released back in 2012 (NHSA 2012 MTF Report), we will be updating it with the new CCDBG/CCDF requirements related to monitoring.

- NHSA MTF Recommendations
- NHSA Updated MTF Report 2017

The **Federal Departments of Health and Human Services and the the United States Department of Agriculture** recently put forth a joint monitoring statement which will have a significant impact on the overall quality of child care. Here is the overall link to the website and the specific joint policy statement:

- The HHS/USDA Joint Monitoring Statement Website
- The Joint Policy Statement

The RIKI Blog has posts regarding ***Caring for Our Children Basics*** **(CFOCB)** and its potential impact on the ECE field. I am taking a look at a few of the standards and why they are so important to the ECE field in establishing a firm foundation to ECE health and safety for all children. I have geared the blog for parents to think about their own ECE arrangements and if it meets the standards as presented in CFOCB. I am really curious to see what I hear back from parents. (#6/7/9/11/12/13)

We can't underestimate the importance of CFOCB. I have said this in other venues that CFOCB is as important as Developmentally Appropriate Practices when it was first published. CFOCB is a game changer for the USA in that now we (ECE) actually have nationally voluntary standards for all ECE programs. This is a significant event.

Having been a state administrator, policy researcher and analyst for 25 years, I would suggest that present state administrators think about using CFOCB as the basis of any revision to their own state ECE rules/regulations as their core set of rules, and for their basic health & safety standards in the state's QRIS. CFOCB is based upon a solid research base developed over the past five decades. It is one of the best examples of combining the Key Indicator and Risk Assessment methodologies together.

My plan is to think through creative ways that CFOCB can be used by state agencies in helping to improve ECE in their respective jurisdictions. Those of you who know me, know that I have been at this for over 40 years in figuring out the best ways of improving ECE quality for all children. CFOCB is a first step for us. Hopefully, with QRIS we can build upon this solid foundation with CFOCB to really tackle ECE quality.

Please go to RIKInstitute.com to get the latest posts. All the posts are from *Caring for Our Children Basics* and *Caring for Our Children 3rd Edition*.

Here is a new resource from the ***National Center on Early Childhood Quality Assurance*** regarding new Briefs on Health and Safety Topics (***NCECQA Health & Safety Briefs***). I highly

recommend these to parents and providers who are seeking child care or are working in child care. This is just another excellent example of the high quality, thoughtful resources being produced by the National Center.

Based upon 40+ years of research into identifying key licensing and quality indicators it is possible to distill this list of key indicators into three areas/factors when related to rules/regulations/standards. These three rule/regulatory/standard areas are the following:

1. **A highly qualified ECE Director with a BA/MA in ECE.**
2. **Highly qualified ECE Teachers with AA/BA in ECE.**
3. **Parent Engagement similar to what we see in Head Start programs.**

These three areas have appeared consistently in key indicator lists when analyzing state licensing regulations and QRIS standards. In an ECE world with very limited resources, I would recommend that we focus our program monitoring on these three areas in order to efficiently and effectively increase the overall quality of ECE programs.

Another question asked many times is if there is a specific rule/regulation that stands out from all the key indicators, in other words, it shows up on every state's list or most state's lists. There is a rule/regulation that fits this threshold and it has to do with **children's immunizations.** For what ever reason, compliance with this rule/regulation appears to have the ability to consistently discriminate between the highly compliant ECE providers and those that have lower compliance. This is an area that needs additional exploration to determine in greater detail why this occurs. Presently a MCHB research project being undertaken by the Pennsylvania Chapter of the American Academy of Pediatrics ECELS (ECELS Report) will help to provide some answers to "why".

In addition to immunizations, the original thirteen key indicators that were identified in the 1985 *Child Care Quarterly* (1985 CCQ) article have not over the past three decades changed alot (STATE KI X 10KIf). There are fewer of them, **10 rather than 13** with group size and adult child ratio no longer on the list but it is interesting that these key indicators have stayed so constant for such a long time. And over the past three decades, many states have used the original 13 Key Indicators in designing their abbreviated inspections. Here is the original list of the 13 key indicators (Parents Guide Checklist) as published by the National Resource Center for Health and Safety in Child Care. For the convenience of the reader, I have listed the key indicators below, for a more detailed look at these, please use the publications listed above. Those listed with an asterisk (*) are inclusive of the CCDF health and safety national requirements. Those that are ***italicized*** appear approximately two-thirds of the time on state key indicator lists (Thirteen Key Indicators Technical Research Update). All ten requirements are contained within *Caring for Our Children Basics and Stepping Stones*.

1. **Supervision of children**
2. **Hand washing and diapering**
3. **Director & teacher qualifications**
4. ***Children's immunizations****
5. ***Toxic substances are innaccessible****
6. **Emergency plan***
7. **Fire drills**
8. **Child abuse prevention***
9. **Medication administration***
10. ***Staff training/first aid****

One last comment about using the key indicator methodology with different data sets, such as with accreditation or QRIS systems. The key indicator methodology has been also used with ECERS to see if it was possible to find a similar

relationship between scoring very high on individual items and the overall score. Only one item (**Item 16 – Children Communicating**) achieved a perfect correlation (r = +1.00) in which it was always scored very highly with only those ECE programs that scored equally highly on the total ECERS score.

I have maintained a national ECPQIM data base where a portion of these data are available at http://rikinstitute.wikispaces.com in various SPSS data files of the key elements. For interested researchers, I have the full data base available for further analyses.

Dr. Fiene will continue his work in further developing the professional development, training and technical assistance key elements of ECPQIM through his collaborative work with the Pennsylvania Chapter of the American Academy of Pediatrics, ECELS – Early Childhood Education Linkage System's, Infant Toddler Program Quality Improvement Project; and the Penn State Hershey, College of Medicine, Center for the Protection of Children's iLookOut for Child Abuse Prevention Project.

He is also continuing his work in the further development of differential monitoring in Canada with the Province of Ontario's Ministry of Education (Tiered Licensing). This project will provide a comprehensive implementation, evaluation, and validation strategy for those jurisdictions planning on undertaking differential monitoring, risk assessment or key indicator methodologies.

And of course, his continuing collaboration and partnership with NARA – National Association for Regulatory Administration where the further development and dissemination of differential monitoring, risk assessment and key indicator methodologies will continue into the future along with the Validation Studies for each of these methodologies.

The ECELS ITQIP is finishing up its three year MCHB funding and here is an initial draft of the reports that have been produced over the past several years. It begins with the results from the pre-test in order to establish equivalency of the intervention and control groups. This is followed by the results from the first post test comparing the intervention group to the control group and looking at change over time. The third report in the series presents the results from the second post test comparing the cross over effects and latent effects of the intervention and control groups. And lastly, is the tool/instrument used to collect the data for all three years of the study (ECELS ITQIP Reports). This study and project is particularly exciting because it clearly demonstrates the effectiveness of a child care health consultant mentoring/coaching model in impacting selected ***Caring for Our Children*** standards focused on infant and toddler programs. It also demonstrated that the intervention is effective in a cross over methodology as well as having latent/lasting effects. This study builds upon the original mentoring/coaching study conducted at the Penn State Capital Area Early Childhood Research and Training Institute/ Prevention Research Center in 2002 (CAECTI/ PRC Mentoring/Coaching Article).

This study also demonstrated the effectiveness of monitoring. Data taken from the number of hours CCHC (Child Care Health Consultants) spent in programs doing mentoring/coaching had a positive impact on improving compliance with the *Caring for Our Children* standards. But

this result was geared more towards the higher compliant programs and the number of hours in mentoring/coaching was not at the high end of the spectrum. So it appears that just a little help goes a long way with the highest compliant programs. This is significant because with the push for differential monitoring and abbreviated inspections, having several short monitoring visits still helps a program to improve (ITQIP JEHC Article).

Speaking of Validation Studies, here are several reports on QRIS Validation that should help to guide the reader with a strategic framework for doing these types of studies and a couple of other interesting studies and presentations:

- Early Childhood Research Quarterly Special Issue on QRIS Research
- QRIS Validation Framework
- QRIS Validation in Four States
- QRIS Validation Study Designs
- QRIS Validation of a Local Implementation
- QRIS Approaches to Validating Quality Rating & Improvement Systems
- Validation of QRIS
- Measures in QRIS Validation Studies
- QRIS Stakeholders Theories of Change and Models of Practice
- QRIS Maine Evaluation Report
- QRIS Family Child Care
- QRIS RAND Validation Studies
- RAND QRIS Second Generation Studies
- QRIS Studies & Outcomes
- QRIS and Coaching Quality Improvement
- QRIS Minnesota Parent-Aware-Validation Executive Summary
- QRIS Parent Aware Validation Report_Final
- QRIS Washington
- QRIS Validation Resources
- NAEYC Public Policy Report
- QRIS Keystone Stars Report
- South Carolina Childcare Initiatives
- QRIS Iowa
- QRIS Florida
- QRIS Wisconsin
- QRIS Delaware
- QRIS Delaware Validation
- Rhode Island Quality Study
- Texas Early Investment Project
- Foster Dissertation
- Florida ECE Costing Out Study Report
- Lets Talk March PPT
- Nurmesniemi
- PITC Guide Cognitive Development (Spanish) 2016

Letters of support Appropriations Letter, OMB Letter, DOE Letter, DOE Letter1, OMB letter 9.19.17, and Congressional letter 9.19.17 for evidence based programs, regulations, and policies that **RIKI – Research Institute for Key Indicators** signed on to support.

An excellent presentation done by researchers from ASPE, Child Trends, and Georgia DECAL which presents the future of ECE monitoring.

A New Report from ASPE highlighting 13 compelling models for infant toddler early childhood services in which mentoring/coaching models are highlighted, including CAECTI's Infant-Toddler Caregiver Mentoring Program.

Interesting article on the impact of quality early care and education services (Child Encyclopedia Article).

Three reports regarding child care licensing in Canada, Accreditation, and good standards improving child care quality that I found very

interesting.

- Child Care Licensing in Canada
- CCIE Accreditation
- Good Standards Improve Child Care Quality

These two reports demonstrate support for the Theory of Regulatory Compliance which depicts the relationship between program quality and licensing/regulatory compliance where higher licensing standards show a statistically significant relationship with program quality standards but lower licensing standards do not. Also, a plateau effect occurs when moving from substantial regulatory compliance to full regulatory compliance as it relates to program quality standards.

- Head Start Report
- Georgia Report

Because of this plateau effect, it ushered in the key indicator and risk assessment methodologies which are at the basis of abbreviated inspections and differential monitoring. The purpose of these methodologies is not to have less standards or rules or regulations but rather to determine what are the "right" standards/rules/regulations that impact services the most because they statistically predict overall regulatory compliance or reduce harm or risk for morbidity or mortality.

Although the reports and examples are from early care and education, these methodologies are applicable to all human services (e.g., child and adult residential services, etc.) and probably to other regulatory areas outside of the human services arena.

Theory of Regulatory Compliance (**DOI:** 10.13140/RG.2.2.34971.67360)

Recently Georgia DECAL revised their enforcement and compliance policy which demonstrates one of the better examples of a risk asssessment system. Here is the link to their work (http://decal.ga.gov/CCS/Enforcement-CompliancePolicy.aspx).

Here is a discussion I started within NARA (National Association for Regulatory Administration) about regulatory compliance data limitations and potential solutions:

I'd like to start a discussion about the nature of regulatory compliance/licensing data and the implications related to measurement. As a research psychologist who has spent his total professional career examining the impact of regulatory compliance policies on children and families, the issues related to measurement and program monitoring have always been at the forefront of my research studies. I have found regulatory compliance/licensing data to have many limitations when it comes to measurement and analysis because the data are severely skewed.

Why is this important? Generally in the social sciences, research psychologists deal with data that are more normally distributed with sufficient variance. However, licensing data are not and probably never will be close to being normally distributed. Actually, this is a good thing from a public policy point of view. We don't want basic health and safety rules to be normally distributed; we want programs (as many as possible) to be in compliance with these basic health and safety rules. And this is usually what happens. But from a measurement standpoint, it creates difficulties in analyzing the data.

By having severely skewed data, it is difficult at times to distinguish amongst the data between mediocre programs and either higher performers or lower performers because there isn't sufficient variance/separation in their scores. When I first noticed this, I suggested the use of weights attached to each rule in order to increase the variance in the data. This helps but is not sufficient in increasing the variance in the data. Unfortunately, this will always be a shortcoming of licensing data.

I point out this above limitation for future researchers who will be dealing with licensing data so that they can be aware of this but also to look at other statistical solutions to this problem and as a discussion point within NARA with other members to be aware.

I started a discussion earlier this morning (the above post) in which I presented some issues with regulatory compliance/licensing data. I don't like bringing up issues or problems without at least proposing some solutions. So here are some solutions to this problem regarding licensing data skewness.

One way is through weighting (I suggested this in my earlier post so let me expand here) which I have advocated for that introduces more variance in the data. This helps and is the basis for risk assessment systems but it can only go so far because it is really a statistical manipulation where we are saying that all regulations are not created nor administered equally. There are some regulations/rules that are more important than others; in other words, there are particular regulations/rules which reduce the potential risk of morbidity/mortality to clients if complied with.

Another potential solution, which I have observed in Pre-K programs, is the introduction of higher standards and their resulting influence on licensing compliance in general. This may be a more effective way to deal with the problem with skewness in data. If the data become more normally distributed because the standards are more stringent, this is a good thing. I think with Pre-K standards being utilized in more states and the advent of *Caring for Our Children Basics* that we may see a change in data distributions.

A complementary issue that probably is a result of the skewness of data has to do with the non-linear relationship between regulatory compliance and program quality. I have termed this relationship, Theory of Regulatory Compliance. This relationship I first observed in Pennsylvania in the late 1970's in early care and education (ECE) programs. I have continued to find this relationship between regulatory compliance and program quality data which is unsettling from a public policy standpoint. As a public policy administrator one expects that quality increases with higher levels of regulatory compliance, right. But this non-linear relationship doesn't support this conclusion – some of the highest quality programs are in substantial but not full regulatory compliance. I have suggested that higher licensing standards may eliminate this plateau effect when a high quality Pre-K program is introduced in a state ECE delivery system.

It was because of this non-linear relationship between regulatory compliance and program quality that ushered in the introduction of licensing key indicators and risk assessment systems in attempting to make inspection visits more efficient and effective by balancing program monitoring with quality initiatives.

These results are from the ECE research literature base but I strongly feel that these findings are applicable throughout the human services field and possibly beyond into any regulatory environment, such as banking or environmental regulations, to name a couple of different venues. This is more about finding the *"right"* regulations to monitor rather than finding *"fewer or more"* regulations to monitor. By utilizing a risk assessment/key indicator approach, this could be a solution to the deregulatory paradox.

For the interested reader, many of my reports which highlight the results above can be found at http://RIKInstitute.com/ecpqim

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Here is another discussion question that I have been giving a great deal of thought to in how the key indicator methodology can be used. Generally, in the past, it has been based upon the compliance history (CI) for a specific provider. Very high regulatory compliance makes a program eligible for the use of an abbreviated key indicator inspection (KI). Very low regulatory

compliance disqualifies a program for the use of an abbreviated key indicator inspection and generally leads to a more comprehensive full review of all rules (CI).

But there is another way to use the key indicator methodology. It could be used as a screener where every provider in a state receives the abbreviated key indicator inspection (KI) and based upon the results (compliance with all the key indicators) either the program gets another abbreviated inspection (KI) the following year or it moves to a more comprehensive full review (CI) if non-compliance is found with any of the key indicators.

In summary form, it would look something like this:

Compliance History data (CI) –> If high, key indicator inspection (KI), or if low, full comprehensive review (CI). (CI –> KI or CI).

Key Indicator as screener (KI) –> If high, key indicator inspection next year (KI), or if low, a full comprehensive review (CI). (KI –> KI or CI).

The advantage with the screener approach is that all providers from the beginning get a chance to be measured via key indicators. This could be looked upon by providers as initially more equitable in the application of key indicators. Something to think about as we move forward in the future development of the key indicator methodology.

NARA Newslink Blog of the Month – Key Indicators, by Dr. Rick Fiene.

We often get asked….'What exactly are Key Indicators?' and 'Why should my state agency be interested'? This month, Dr. Rick Fiene, the creator of The Key Indicator Methodology has posted a blog to answer those questions. Read today and post your comments. And if your interest has been peaked, join the ***Key Indicator Circle*** – a be a part of the NARA community.

NARA has recently created a Key Indicator webpage (http://www.naralicensing.org/key-indicators) that should help state licensing administrators get additional information about differential monitoring, risk assessment, and key indicator systems. I would highly recommend anyone who is interested to check out the new website. It is listed under the NARA Resources Folder on the Menu, just click on Key Indicators.

Here is a pdf of the page which compiles the various reports and studies listed on the NARA webpage (NARA Key Indicator Reports & Studies Examples from Webpage).

RIKI – Research Institute for Key Indicators (http://RIKInstitute.com) has joined a select group of organizations in a strategic partnership with NARA – National Association for Regulatory Administration. Here is the statement on NARA's website:

Strategic Partnerships

NARA has developed a broad spectrum of strategic relationships that provide access to the most up-to-date information on child care and child welfare regulations at both the federal and state levels. NARA's collaborative relationships with agencies and advocacy organizations include:

- Collaborative Relationships within the Administration for Children & Families (ACF), Office of Child Care
- National Center for Early Childhood Quality Assurance (NCECQA)
- Children's Environmental Health Network
- Childcare Exchange
- The National Resource Center for Health and Safety in Child Care and Early Education (NRC)
- Generations United
- Annie E. Casey Foundation
- American Bar Association
- RIKI Institute

For more information, please email collaborations@naralicensing.org.

I recently updated the ***NARA Licensing Curriculum Licensing Measurement and Systems Course***. Here is a brief outline of the Course (Content (Webpage location)):

Licensing Measurement, Regulatory Compliance, and Program Monitoring Systems

Richard Fiene, Ph.D.

- ***Overview (ECPQIM/DMLMA & Publications)***
- ***Conceptual/Theoretical Framework (ECPQIM/DMLMA & Publications)***
- ***Principles of Instrument Design (RIKI Reports & Appendix)***
- ***Measurement: Reliability and Validity (RIKI Reports & Appendix)***
- ***Regulatory Compliance and Program Quality (ECPQIM/DMLMA)***
- ***QRIS and other Quality Initiatives (RIKI Blog)***
- ***Statistical Methods and Data Base Development (RIKI Reports & RIKI Blog)***
- ***Coordinated Program Monitoring, Evaluation, & Validation (National)***
- ***Differential Monitoring, Risk Assessment, Key Indicators (ECPQIM/DMLMA & RIKI Blog)***
- ***What Research Tells Us (Posters/Articles)***
- ***What Research Doesn't Tell Us: Unanswered Questions (RIKI Blog)***
- ***National, International, and State Examples (RIKI Reports, RIKI Blog & Appendix)***
- ***Future Directions (RIKI Blog)***
- Text Book: ***(RIKI ECPQIM-DMLMA Book of Readings)***
- Lectures: ***(RIKI/NARA ECPQIM/DMLMA Slides)***

Please contact Dr Fiene if you have questions or comments:**Rick Fiene, Affiliate Professor, Penn State Prevention Research Center at *rjf8@psu.edu*, or *riki.institute@gmail.com or RFiene@NARALicensing.org***

Big news out of the Province of Ontario: the Child Care Quality Assurance and Licensing Branch within the Early Years Division won their Ontario's Ministry of Education Realm Award for Innovation for their Tiered Licensing System. The REALM Awards recognize excellence and achievement in the Ministry of Education and the Ministry of Training, Colleges and Universities (the Learning Ministries). Their Tiered Licensing System utilizes the Differential Monitoring, Key Indicator, and Risk Assessment Methodologies. What is so exciting about the Ontario Tiered Licensing System is that it uses both key indicators and risk assessment approaches for their differential monitoring system. Most jurisdictions use either key indicators or risk assessment but not both together. The Ontario approach provides a blueprint for combining the two methodologies together in the most cost effective and efficient differential monitoring approach. The NARA Press Release: (narapressrelease-award 002).

Additional information about the award and project:

The **Prix REALM Awards** program formally recognizes Learning Ministries' (Ministry of Education and Ministry of Training, Colleges and Universities) staff for exceptional and outstanding contributions to:

- the services provided to Ontarians and/or,
- making the Learning Ministries a better place to work

This year outstanding achievements will be recognized in five award categories: Collaboration, Customer Service, Diversity and Inclusion, Innovation, Leadership and Lifetime Achievement

Won for Innovation:

Eligibility: Nominees in the category must have developed a new way of doing or thinking beneficial to a business process, program, initiative, or work environment.

About the project:

As part of the modernization of child care, Ontario's Ministry of Education has developed an innovative risk-based approach to child care licensing – tiered licensing. Tiered licensing is designed to maximize the effectiveness and efficiency of the licensing process by focusing ministry resources where it matters most – on centres that need help to achieve compliance and areas of highest risk to children's health and safety and importance to their learning and development – with the goal of improving regulatory compliance in all centres. Tiered licensing is built on best practices from across North America, a robust methodology and a cutting edge IT solution.

More details:

Ontario's Ministry of Education has developed an original, transformative and innovative risk-based approach to child care licensing called tiered licensing.

The tiered licensing approach has been designed in-house to maximize the effectiveness and efficiency of the licensing process with the goal of improving regulatory compliance and quality in all child care centres. Under this approach, ministry resources will be targeted to areas where they matter most – on centres that need extra support to come into compliance and on areas of highest risk to children's health and safety. At the same time, the approach will free up resources to provide more in-depth support in the important area of child development and wellbeing.

The ministry is transforming how child care licensing is performed in Ontario through tiered licensing by engaging the expertise of front line staff, Municipalities and licensees and integrating best practices from across North America to develop a robust new methodology and a cutting edge IT solution.

Ontario will be the first province in Canada to adopt a comprehensive risk-based approach for child care licensing and is now on the map as a North American leader in innovative regulatory practices. Dr. Richard Fiene, a leader in the field of regulatory administration for over four decades and a consultant on the project, has referred to Ontario's approach as a "blueprint that other jurisdictions should follow."

A Canadian Perspective Implementing Tiered Licensing in Ontario

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NARA 40 years of Milestones:

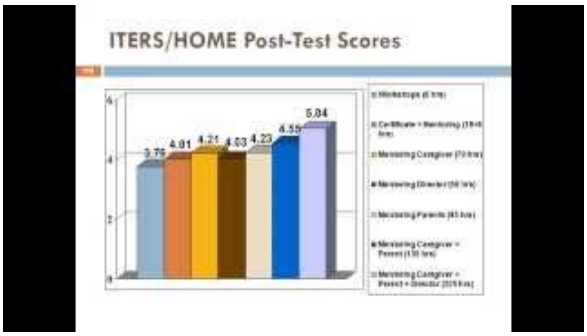
NARA Milestones

Maine is in the news for improvements to their child care licensing program. Please go to the following link (Maine Licensing System) to learn more.

Here is a powerpoint presentation for researchers and statisticians which has all the math and logic modeling for ECPQIM.

Math/Logic Modeling of ECPQIM

Here is a pdf of the latest powerpoint presentation which has an evaluation and validation study of differential monitoring, key indicators and risk assessment methodologies:



- PPT139 NARA-RIKI – Single slides per page (139 pages).
- PPT139 NARA-RIKI6 – Multiple slides per page (24 pages).

RESEARCH INSTITUTE FOR KEY INDICATORS (RIKI) Contributions to the Human Services Field

- **Early Childhood Program Quality Improvement and Indicator Model**
- **Differential Monitoring Logic Model and Algorithm**
- **Clustering/Herding Behaviors of Two Year Olds**
- **Regulatory Policy based upon Clustering/ Herding for Adult Child Ratios**
- **Mathematical Model for Computing Adult Child Ratios**
- **Child Development Program Evaluation Scale – CDPES**
- **Theory of Regulatory Compliance**
- **Instrument Based Program Monitoring**
- **Human Service Program Differential Monitoring**
- **Licensing Weighting/Risk Assessment – CFOCB and Stepping Stones**
- **Licensing and Quality Key Indicators – 13 Indicators of Quality, HSKI**
- **National Early Childhood Program Accreditation (NECPA)**
- **Human Service Provider Mentoring/ Coaching – CAECTI/ECELS**
- **Pinging linked with Coaching and Individualized Learning**

EARLY CHILDHOOD PROGRAM QUALITY IMPROVEMENT & INDICATOR MODEL (ECPQIM) KEY ELEMENTS (Publications)

- **The ECPQIM/DMLMA Model**
  - ***International Regulatory Compliance Comparisons – ICEP***
  - ***Licensing & Monitoring Publications – ASPE, OCC, CCQ, NARA, ZTT***
- **Program Compliance**
  - ***Caring for Our Children – NRC/AAP/APHA***
  - ***Instrument based Program Monitoring – CCQ***
- **Program Quality**
  - ***Keystone Stars Evaluation – OCD; Validation – OPRE***
  - ***Infant Toddler Mentoring/Coaching Program – CYCF, ASPE***
  - ***Health Consultants Impact Infant Toddler Care – JPHC***
  - ***National Early Childhood Program Accreditation – NECPA***
- **Program Compliance x Program Quality**
  - ***Theory of Regulatory Compliance – NEJHS***
  - ***Child Development Program Evaluation Scale – CCQ***
- **Risk Assessment**
  - ***Stepping Stones – NRC/AAP/APHA***
- **Key Indicators**
  - ***Thirteen Key Indicators of Quality Child Care – ASPE***
  - ***Head Start Key Indicators – OHS***
- **Risk Assessment x Key Indicators**
  - ***Caring for Our Children Basics – ACF***
- **Child Development Outcomes**
  - ***Quality in Child Care: What Does Research Tell Us? – NAEYC***

. **ECPQIM0: 1972 – 1974. Regional Model; EMIS (Fiene etal, 1975)*. This was the original conceptualization when I was a graduate student. (ECPQIM0/EMIS)**

. **ECPQIM1: 1975 – 1994. Qualitative to Quantitative; focus on reliability; data utilization linking monitoring to training/**

technical assistance systems; distinctions between program monitoring and evaluation; Key Indicators, Weighted Rules, & principles of licensing instrument design introduced. (Fiene, 1981; Fiene & Nixon, 1985). This is the original article written describing the model and suggesting the use of differential monitoring. (ECPQIM1/CCQ)

- **ECPQIM2: 1995 – 1999. Policy Evaluation and Regulatory Systems Planning added to model. (Griffin & Fiene, 1995). (ECPQIM2/ZTT)**
- **ECPQIM3: 2000 – 2011. Inferential Inspections & Risk Assessment terminology added to the model. (Fiene & Kroh, 2000). (ECPQIM3/NARA)**
- **ECPQIM4/4+: 2012 – present. Validation with expected Thresholds & Differential Monitoring formally added via a logic model and algorithm; Quality Indicators introduced. (Fiene, 2012, 2013b, 2015). (ECPQIM4/DMLMA)**

These are the various editions/versions of the Early Childhood Program Quality Improvement and Indicator Models (ECPQIM0–4+) that I developed while a graduate student and then improved upon the original design. All the citations can be found in the publications webpage which is part of this RIKI website.

The next section below contains the most recent examples of ECPQIM key elements. These are all projects actively going on presently (2016) in the Province of Ontario, Pennsylvania Chapter of the American Academy of Pediatrics, and the Penn State College of Medicine.

- ECPQIM1 DM, KI, RA Evaluation & Validation
- ECPQIM2 PD Mentoring
- ECPQIM2 PD Mentoring/Coaching
- ECPQIM2 PD ECELS
- ECPQIM2 PD ITQIP
- ECPQIM3 PD Internet Training
- ECPQIM3 PD Internet Training Research Protocol

Here is a very important technical aspect of the Key Indicator Methodology that I want to share with researchers and statisticians. There are many different cut points or thresholds that can be used to determine the high group from the low group in constructing the 2 x 2 matrix for the phi coefficients (Φ **= *(a)(d) – (b)(c)/sqrt (w)(x)(y)(z))***. Ideally, ***(a)(d)*** should be much higher than ***(b)(c)***. In fact, ***(b)(c)*** should be as close to zero as possible. For example, the high regulatory compliance group ***(a)*** could only be those providers who attain 100% regulatory compliance with all rules/regulations. The low regulatory compliance group ***(d)*** could be those providers who attain 99% or lower regulatory compliance with all rules/regulations. Or the high group could be 100-99% regulatory compliance and the low group could be 95% or less regulatory compliance with all rules/regulations. In this approach the middle 50% of the data are not used. I have reported in a previous technical report that a top 25% and a bottom 25% of compliance history for programs was the most optimum cut points. It appears from two separate studies to test this hypothesis that this approach does appear to be the most effective and efficient dichotomization of the regulatory compliance data.

A study completed in New York bears this out where various cut points/thresholds were used. Another study going on in Michigan (Centers, Family Homes, Group Homes) where various cut points/thresholds were used with the regulatory compliance data supports this contention as well.

For reaching me online, here are my email and website contacts at RIKI and NARA:

Richard Fiene, Ph.D., Research Psychologist
RIKI – Research Institute for Key Indicators

LLC
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NARA – National Association for Regulatory Administration
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RFiene@NARALicensing.org
http://RIKInstitute.com/RIKI
http://www.naralicensing.org/key-indicators

RIKI – Research Institute for Key Indicators LLC, is a Pennsylvania Limited Liability Company.

December 2016

Regulatory Compliance Monitoring Paradigms and More

Thursday 29 December, 2016

Here are some working papers and graphics I have started to work on to provide direction and guidance for regulatory compliance monitoring at both the state and national levels. Most of the examples are from early care and education but the concepts are generic and can be applied to any public or private human service regulations.

- National Differential Monitoring Conceptual Framework
- Regulatory Compliance Monitoring Paradigms (**DOI:** 10.13140/RG.2.2.23767.06564)
- Theory of Regulatory Compliance (**DOI:** 10.13140/RG.2.2.34971.67360)
- ECPQIM/DMLMA Update
- Theory of Regulatory Compliance Working Research Papers 2017
- Theory of Regulatory Compliance Algorithm 2017
- Theory of Regulatory Compliance Algorithm in Excel 2017

February

2017

Research Services

Wednesday 1 February, 2017

If you are in need of *empirically based decision making* via big data analysis, RIKILLC may be a resource you explore. RIKILLC can help organizations, agencies, and businesses as they wade through the reams of data swirling in their various data bases. Based upon practically a half century of experience in exploring research trends in data, put these resources to use in your own establishment.

Sample Reports:

- National Report Example
- State Validation Report Example
- State Blueprint Report Example
- State Quality Assessment Report Example

For additional information, please email **Fiene@RIKInstitute.com**.

Or for those interested in the future development and dissemination of *Differential Monitoring, Key Indicator and Risk Assessment* methodologies as addressed in the National Association for Regulatory Administration (NARA) website (**http://www.naralicensing.org/key-indicators**), please contact **RFiene@NARALicensing.org** for additional details.

Or for those interested in the *Regulatory Compliance Monitoring Paradigm* research as addressed in the RIKI Blog (**https://rikinstitute.com/blog/)**, please contact **rjf8@psu.edu** for additional details.

Theory of Regulatory Compliance Working Research Papers & Algorithms 2017

Tuesday 7 February, 2017

Three working papers and algorithms for 2017 that provide some guidance for those who are more interested in the Theory of Regulatory Compliance math modeling. I have expanded upon a previously posted working paper (first paper) providing additional details on the algorithms (second document) presented in the first paper and examples in Excel (third document).

. Theory of Regulatory Compliance Working Research Papers 2017

. Theory of Regulatory Compliance Algorithm 2017

. Theory of Regulatory Compliance Algorithm in Excel 2017

Technical Research Notes & Papers

Saturday 11 February, 2017

Here are several Technical Research Notes and Papers updating, refining, and validating the differential monitoring, risk assessment and key indicator methodologies:

- Regulatory Compliance Matrices
- Theory of Regulatory Compliance & Regulatory Compliance Monitoring Paradigm Matrix Research Notes
- Key Indicator Methodology 2015 Update
- DM, RA, KI Predictive Analytics Questions
- Dichotomization of Data
- Key Indicator Technical Notes (2) 2015
- Validation of Key Indicator Systems
- Validation of Key Indicators Examples
- Classification Matrix Sensitivity Analysis

There is a very useful analytical technique which can be used with the above validation papers that I would suggest (Classification Matrix and Sensitivity Analysis for Validating Licensing Key Indicators)(better known in the statistical and data analysis field as the "Confusion Matrix") researchers using which provides several measures to determine if the Licensing Key Indicator methodology is working as it should. Please pay particular attention to the following measures: accuracy, correlation, and false negatives when determining the validity of your Licensing Key Indicator System.

NARA February 23rd Webinar on Regulatory Compliance Monitoring Paradigms

Friday 17 February, 2017

NARA – National Association for Regulatory Administration will be hosting a Webinar (February 23rd) on ***Regulatory Compliance Monitoring Paradigms***. Please see the following URL for additional information: NARA Webinar Announcement

The Penn State Edna Bennett Pierce Prevention Research Center Webpage Announcement about the Webinar:

Edna Bennett Pierce Prevention Research Center Annoucement

RIKI

Tuesday 28 February, 2017

The RIKI (Research Institute for Key Indicators) Institute, directed by Dr Richard Fiene, Retired Professor of Psychology and Human Development, Penn State University, focus is to improve the quality of early care and education programs nationally and internationally through an empirically based Key Indicator Methodology. Readers will find selected publications on this website and the links listed below that describe the specific Key Indicator methodology created by Dr Fiene.

June 2017

NARA Webinar: A Canadian Perspective: Implementing Tiered Licensing in the Province of Ontario

Wednesday 7 June, 2017

NARA Webinar: A Canadian Perspective: Implementing Tiered Licensing in the Province of Ontario

Thursday, June 22 Register Today!

Faced with growing caseloads for their child care inspectors, the province of Ontario recently implemented a "tiered" approach to allocating licensing resources. Under the new system, centers that have consistently demonstrated high levels of compliance (Tier 1 and 2) are rewarded with longer duration licenses and abbreviated inspections, while lower-performing centers (Tier 3) receive additional ministry oversight and support. In this session, you will learn about the data-driven tier assessment model, the methodology used to develop the abbreviated inspection checklist and early evaluation results.

Featuring

Dana Green, Manager, Child Care Quality Assurance and Licensing Branch, Ontario

Natasha Kabani, Senior Policy Analyst, Child Care Quality Assurance and Licensing Branch, Ontario

12:30-1:30pm AST

11:30-12-30pm EST

10:30-11:30am CST

9:30-10:30am MST

8:30-9:30am PST

7:30-8:30am AKST

Cost: $45 for members, $60 for non-members

NARA and Montana

Wednesday 28 June, 2017

Here is a collaborative effort between NARA and Montana describing the Key Indicator System Methodology:

NARA – National Association for Regulatory Administration Key Indicator Powerpoint Presentation and Audio:

(https://zoom.us/recording/play/4L2v_U3rxDuNe5bZDPpR8mEXaIpkXzu-naG_H8k0hWULjUVJ6Ciq-Teo0NmMVpHQyw)

NARA Licensing Key Indicator Systems Flyer

Wednesday 28 June, 2017

This is a new NARA Flyer describing the Licensing Key Indicator Systems. The flyer provides an overview to the key indicator methodology and its possible uses within agencies:

Please click on the following Link:

NARA Licensing Key Indicators

Penn State Prevention Research Center Updates their Website

Friday 30 June, 2017

The Pennsylvania State University Edna Bennett Pierce Prevention Research Center has updated their website recently:

http://www.prevention.psu.edu/

July

2017

Contact Information

Thursday 6 July, 2017

Many of you have asked what is the best way for getting in touch with me. Here is my latest contact information:

- **Dr Richard Fiene, Senior Research Psychologist & Director**
- **Research Institute for Key Indicators LLC (RIKILLC)**
- **717-598-8908**
- **RFiene@RIKInstitute.com**

Email continues to be the best way to get in touch with me.

In partnership with the National Association for Regulatory Administration (NARA) and the Pennsylvania State University's Edna Bennett Pierce Prevention Research Center (PRC). Dr Fiene is a Senior Consultant with NARA and an Affiliate Professor with PRC.

August

2017

CCIS – Child Caregiver Interaction Scale

Sunday 13 *August*, 2017

I have attached two documents by Dr Barbara Carl, Penn State University: the CCIS – Child Caregiver Interaction Scale and a powerpoint presentation regarding the tool. This tool is a wonderful example of an effective and efficient observation tool to measure early care and education program quality. I would recommend state administrators to take a look at it as they develop their tool boxes for measuring quality in their respective states. Dr Carl's contact information is at the end of the powerpoint presentation.

- CCIS Powerpoint Overview
- CCIS – Child Caregiver Interaction Scale

Child Care Health Consultation Improves Infant and Toddler Care

Sunday 20 *August*, 2017

Here is a link to the Journal of Pediatric Health Care which published a very significant study on how child care health consultation improves infant and toddler care.

New Resources from the National Center on Early Childhood Quality Assurance

Wednesday 23 *August*, 2017

Here are two new resources from the National Center on Early Childhood Quality Assurance (ECQA Center):

- ***National Program Standards Crosswalk Tool***
- ***Developing and Revising Child Care Licensing Requirements***

"The National Center on Early Childhood Quality Assurance (ECQA Center) is pleased to announce the release of these new and updated resources that support states and territories in the implementation of Child Care and Development Fund (CCDF) requirements. These and other resources are available on the ECQA Center Web page."

ACF OCC Announcements (8/21/17)

RIKILLC Clients and Proposals

Saturday 26 *August*, 2017

Here is a listing of RIKILLC past and present clients and collaborators as well as proposals that have been submitted to clients and interested clients who have contacted RIKILLC related to services, and expert witness engagements or consults to give individuals an idea of the scope of work undertaken by the Research Institute for Key Indicators LLC over the past five years:

1. **GEORGIA**
2. **GEORGIA EXTENSION**
3. **UNC-CH**
4. **NARA CALIFORNIA**
5. **NARA KANSAS**
6. **NARA MICHIGAN**
7. **NARA WISCONSIN**
8. **NARA ILLINOIS**
9. **NARA MONTANA**
10. **SASKATCHEWAN**
11. **BRITISH COLUMBIA**
12. **NARA WASHINGTON**
13. **NARA NEW YORK**
14. **MISSOURI**
15. **NARA ARIZONA**
16. **NARA DM/KI/RA RIKI**
17. **CFOCB-C/ECELS/PAAAP/UCSF**
18. **ONTARIO**
19. **HEAD START**
20. **LEWIN/DANYA**
21. **NHSA**
22. **NQAC**
23. **OCC**
24. **ACF**
25. **ASPE**
26. **MASSACHUSETTS**
27. **ICFI/KOCH**
28. **ICFI**
29. **NQA/ICFI**
30. **INQUIRE**
31. **HAWAII**
32. **OREGON**
33. **COLORADO**
34. **NEW YORK**
35. **EDS DELAWARE QRIS**
36. **ECELS PA AAP**
37. **HERSHEY MEDICAL CENTER/CPC/PENN STATE (3)**
38. **VIRGINIA LEGAL**
39. **NEW JERSEY LEGAL**
40. **BETTER KID CARE/PENN STATE**

NARA 2017 Licensing Seminar

Wednesday 30 *August*, 2017

The National Association for Regulatory Administration (NARA) is holding its 25th Annual Licensing Seminar next month. Please see the attached brochure which highlights this premier seminar on regulatory administration and compliance in the human services field (NARA 2017 Seminar Program).

nara RIKI

September 2017

NARA Webinar: The Importance of Key Indicators and Risk Assessment in a New National ECE Monitoring System

Tuesday 5 September, 2017

NARA Webinar: The Importance of Key Indicators and Risk Assessment in a New National ECE Monitoring System and the Introduction of a new Coaching Model

Thursday, September 28, 2017 – Register Today!

We will explore how key indicator and risk assessment methodologies contribute to the development of a national monitoring system for federally funded ECE programs and how a new technology called "Pinging" may be an innovative delivery model for online coaching.

Featuring Dr. Rick Fiene of the Research Institute for Key Indicators and the Prevention Research Center, Pennsylvania State University.

Efficient and Effective Monitoring in Licensing Peer Learning Group

Monday 25 September, 2017

The BUILD Initiative – QRIS National Learning Network, NECQAC – National Early Childhood Quality Assurance Center, and NARA- National Association for Regulatory Administration have collaborated on the development and implementation of a major initiative with ten states dealing with more efficient and effective monitoring in licensing.

Please see the following HHS/ACF Office of Child Care website (***2017 Efficient and Effective Monitoring in Licensing Peer Learning Group***) for the details of this innovative Peer Learning Group. Ten states (Alabama, Delaware, District of Columbia, Indiana, Iowa, Pennsylvania, New

Jersey, Rhode Island, Texas, and West Virginia) participated in the Peer Learning Group and the series of webinars have produced several significant resources. I would highly recommend this webinar series for other states, other human services, and other jurisdictions to take a look at this innovative approach to monitoring in licensing. The webinars really do move the human services licensing and monitoring fields forward in so many positive ways.

October 2017

Article published in Journal of Pediatric Health Care

Friday 20 October, 2017

The following article is being published in the **Journal of Pediatric Health Care, Volume 31, Issue 6, November–December 2017, Pages 684-694: *Caring for Our Children Health and Safety Standards Into Child Care Practice: Child Care Health Consultation Improves Infant and Toddler Care***. This article describes a very successful coaching/mentoring intervention.

November

2017

Licensing and Quality Data Distributions

Thursday 9 November, 2017

Here are two technical research notes which depict licensing and quality data distributions from several states and national data bases maintained by the **Research Institute for Key Indicators (RIKILLC).**

- Licensing and Quality Descriptive Statistics with Graphic
- Licensing and Program Quality Data Distributions

The most prominent aspect of the data displays is the skewness of the licensing data in comparison to the quality data which are more normally distributed. Because of the non-parametric tendencies of licensing data there are limitations in analyzing the data. It also introduces certain unwanted results in which a good deal of mediocrity is introduced into the highest levels of compliance with licensing rules when compared to quality scores. With these limitations in the data, certain methodologies were introduced to overcome these, such as risk assessment/weighting of rules and key indicator/predictor rules to focus and target monitoring reviews on the most critical health and safety rules/regulations. Differential monitoring is the result when these two methodologies are employed in a program monitoring system.

iLookOut for Child Abuse

Thursday 9 November, 2017

The ***iLookOut for Child Abuse*** **Online Training Program** sponsored by the Center for the Protection of Children and Department of Humanities, Penn State Hershey and funded by National Institute for Child Health and Human Development is a must see for human service state administrators and training/professional development coordinators. The ***iLookOut*** training will explain signs, symptoms, and risk factors of abuse as well as what, how, and when to report suspected child abuse. Overall, the participant will learn their role as a mandated reporter. Please go to the following website to find out more: **(http://ilookoutproject.org/).**

Here is the latest presentation by Dr Benjamin Levi on the iLookOut program and a poster presentation by Dr Carlo Panlilio:

iLookOut Presentation

iLookOut Poster

January 2018

NARA Webinar: Theory of Regulatory Compliance, January 25, 2018

Tuesday 9 January, 2018

NARA Webinar: Theory of Regulatory Compliance*Thursday, January 25, 2018 – Register today!*

1:30pm AT12:30pm ET11:30am CT10:30am MT9:30am PT8:30am AKT

The theory of regulatory compliance is the basis for risk assessment, key indicators and differential monitoring. Without this theory, these methodologies could not be used within human service licensing. This webinar will discuss the essence of the theory and its implications beyond human service licensing to econometrics.

FeaturingDr. Rick Fiene, Research Institute for Key Indicators

Dr. Fiene has spent 40+ years in developing and improving key indicator, risk assessment and differential monitoring methodologies. After a long career in Pennsylvania State Government as a research psychologist and the Pennsylvania State University as a professor of psychology, in 2013 he created the Research Institute for Key Indicators (RIKI) in order to consolidate all research on differential monitoring. Most recently RIKI has entered into a strategic partnership with NARA on the future development of key indicators, risk assessment and differential monitoring to all human services.

New OPRE Research Report on QRIS Validation Studies

Friday 26 January, 2018

Attached is a new OPRE Research Report on the Validation of Quality Ratings Used in QRIS – Quality Rating and Improvement Systems:

Validation of Quality Ratings in QRIS

February

2018

Early Childhood Innovation Prize

Saturday 3 February, 2018

This is one of the most interesting initiatives and solutions in early care and education that I have seen. It is like the "Nobel Prize" for Early Childhood Education. What a great idea! So collaborative and creative. Please check out the following websites for additional information:

Early Childhood Innovation Prize

Early Childhood Program Quality Improvement and Indicator Model (ECPQI2M)

Early Childhood Task Force with Fred Rogers as Honorary Chairperson

Tuesday 20 February, 2018

Here is an oldie but one that is worth sharing since we are celebrating Fred Rogers 50th Anniversary of Mr Rogers Neighborhood: creation of the Early Childhood Task Force with Mr Rogers as the honorary chairperson as signed by then Governor Schweiker back in 2002. Here is the announcement about the creation of the Task Force:

Early Childhood Task Force with Gov Schweiker and Mr Rogers

NARA March Webinar: Key Indicators for Adult Care

Wednesday 21 February, 2018

MARCH WEBINAR
KEY INDICATORS FOR ADULT CARE

NARA Webinar: Key Indicator Systems in Adult Care Settings – A Powerful Resource
Thursday, March 8 2018 – Register today!

1:30pm AT12:30pm ET11:30am CT10:30am MT9:30am PT8:30am AKT

Key Indicator Systems identify a statistically-validated subset of regulations that indicate compliance with the entire set of regulations, allowing licensing oversight agencies the ability to conduct abbreviated inspections while still ensuring that safe, high-quality care is provided in all settings.

Although agencies nationwide are moving towards Key Indicator Systems as an effective alternative to traditional licensing methods, nearly all Key Indicator Systems are developed for child care programs, and are vastly underutilized in adult-care licensing.

This webinar will present an overview of how Key Indicator Systems work, discuss why such systems are not more prevalent in adult-care licensing programs, and explore the benefits of Key Indicator Systems to persons in care, adult-care providers, the licensing agency, and the general public.

FEATURING

Ronald Melusky, Director of the Division of Program Operations, PA Dept. of Human Services

Mr. Melusky is the Director of the Division of Program Operations in the Pennsylvania Department of Human Services, Office of Developmental Programs. His division oversees statewide implementation of licensing activities in day and residential programs for adults with intellectual disabilities and autism. Mr. Melusky has previously served as a member of NARA's Board of Directors and as President-Elect from 2012 – 2014. He has assisted in the development of Key Indicator Systems for numerous licensing oversight agencies.

NARA Key Indicator System: Facilitated Dialogues with Dr. Rick Fiene

Wednesday 21 February, 2018

Key Indicator System: Facilitated Dialogues w/ Dr. Rick Fiene

NEW! FOR PROFESSIONALS IN…

Child Care | Adult Care | Child Welfare

In partnership with Dr. Rick Fiene, NARA is starting facilitated dialogues on Key Indicator Systems. The Key Indicator System methodology applies across licensing areas and these dialogues will allow licensing professionals across child care, adult care, and child welfare to discuss the application and theory of Key Indicators as they increase efficiency and effectiveness of existing licensing systems.

This group will meet for one hour in March, June, and during NARA's Annual Licensing Seminar in 2018. Additional meetings will be determined as the group sees fit.

To join this new group, please fill out this short 3 question survey to indicate your interest and let us know which Key Indicator topics most interest you.

March

2018

NARA's KEY INDICATOR FACILITATED DIALOGUES with DR. RICK FIENE

Tuesday 13 March, 2018

NARA (National Association for Regulatory Administration) is excited to present new, facilitated dialogues on Key Indicators with Dr. Rick Fiene, the father of the Key Indicator System. The Key Indicator System methodology applies across all licensing areas; these dialogues will allow licensing professionals across child care, adult care, and child welfare to discuss the application and theory of Key Indicators as they increase efficiency and effectiveness of existing licensing systems.

This group will meet for one hour in March, June, and during NARA's September Licensing Seminar in 2018. Additional meetings will be determined as the group sees fit.

Dr. Fiene has spent 40+ years in developing and improving Key Indicator, risk assessment and differential monitoring methodologies. After a long career in Pennsylvania State Government as a research psychologist and the Pennsylvania State University as a professor of psychology, in 2013 he created the Research Institute for Key Indicators (RIKI) in order to consolidate all research on differential monitoring. Most recently RIKI has entered into a strategic partnership with NARA on the future development of Key Indicators, risk assessment and differential monitoring to all human services.

Please go to the following webpage for additional information:

www.naralicensing.org/key-indicator-facilitated-dialogues

NARA's Key Indicator System: Facilitated Dialogues this Friday, March 23rd

Tuesday 20 March, 2018

Key Indicator System: Facilitated Dialogues this Friday, March 23

Join Dr. Fiene and NARA at

3-4pm AT |2-3pm ET |1-2pm CT |12-1pm MT | 11-12pm PT | 10-11am AKT

Child Care | Adult Care | Child Welfare

NARA is excited to present facilitated dialogues on Key Indicators with Dr. Rick Fiene, the father of the Key Indicator System. The Key Indicator System methodology applies across all licensing areas; these dialogues allow licensing professionals across child care, adult care, and child welfare to discuss the application and theory of Key Indicators as they increase efficiency and effectiveness of existing licensing systems.

2018 Meeting Details

Months: March, June, and September**Duration:** 60 minutes**Date/Time:** March 23 at 2-3pm ET

Every effort will be made to find a date that works for all participants, however, if you cannot join a meeting: 1) you may submit questions in advance for Dr. Fiene to answer, and 2) NARA will send you the discussion recording.

September's meeting will be held *both* in person for those attending seminar and via conference call line.

Meeting recordings will be made available to participants.

Participants will be given access to a Community Forum to continue discussion and ask questions between meetings.

Additional meetings into 2018 and beyond will be determined as the group sees fit.

To Join this Group

Complete registration and payment for the 2018 Facilitated Dialogues Package – three (3) 60-minute meetings in 2018 to learn from Dr. Fiene and ask questions specific. You may join this group after it begins in March; you will be sent the recordings for meetings missed.

Register here

Member cost:

Individual and Organizational: $75 per person (breaks down to $25 per session)

Retiree & Student: $60 per person (breaks down to $20 per session)

Non-member cost: $120 per person (breaks down to $40 per session)

About Dr. Rick Fiene

Dr. Fiene has spent 40+ years in developing and improving Key Indicator, risk assessment and differential monitoring methodologies. After a long career in Pennsylvania State Government as a research psychologist and the Pennsylvania State University as a professor of psychology, in 2013 he created the Research Institute for Key Indicators (RIKI) in order to consolidate all research on differential monitoring. Most recently RIKI has entered into a strategic partnership with NARA on the future development of Key Indicators, risk assessment and differential monitoring to all human services.

NARA's First Key Indicator System Facilitated Dialogue Session Held

Tuesday 27 March, 2018

NARA's Key Indicator System: Facilitated Dialogues was held on Friday, March 23

Participants joined Dr. Fiene and NARA at the following time to discuss Key Indicators, Licensing Measurement & Systems

3-4pm AT |2-3pm ET |1-2pm CT |12-1pm MT | 11-12pm PT | 10-11am AKT

Child Care | Adult Care | Child Welfare

NARA was excited to present the first session of facilitated dialogues on Key Indicators with Dr. Rick Fiene, the father of the Key Indicator System. The Key Indicator System methodology applies across all licensing areas; these dialogues allow licensing professionals across child care, adult care, and child welfare to discuss the application and theory of Key Indicators as they increase efficiency and effectiveness of existing licensing systems.

2018 Meeting Details

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Regulatory Compliance Decision Making Using the Key Indicator Methodology

Friday 30 March, 2018

In this blog I have a new Technical Research Paper on how best to make regulatory compliance decisions. "*The purpose of the paper is to provide guidance to regulatory administrators in decision making regarding the Key Indicator Methodology. A 2 x 2 Matrix will be used to demonstrate the key decisions that need to be made with various caveats and examples. Key Indicator Systems for Licensing have been used in states for many years now; this paper hopefully will provide a framework for the difficult decision making when it comes to moving from an abbreviated monitoring inspection to a full comprehensive monitoring inspection*."

This paper builds upon previous Technical Research Papers and other publications in which I have described the technical details of the key indicator methodology. This paper hopefully provides a more straightforward presentation without the algorithms and statistical formulas.

Regulatory Compliance Decision Making Using the Key Indicator Methodology

Richard Fiene, Ph.D., Senior Research Psychologist, Research Institute for Key Indicators; Professor of Psychology (retired), Penn State University; and NARA Senior Consultant.

Research Institute for Key Indicators (RIKILLC)

April 2018

Three Things We Have Learned in Regulatory Compliance

Tuesday 3 April, 2018

Here is a very short paper/abstract entitled: ***Three Things We Have Learned about Key Indicators, Risk Assessments, and Differential Monitoring*** over the past 40+ years of doing research on these methodologies.

KI, RA, DM National Update

Building Effective and Efficient Program Monitoring Systems for Human Services

Monday 9 April, 2018

Attached is a paper that describes the basic tenets/elements of building an effective and efficient program monitoring system for human services. State administrators are constantly under pressure to ensure the health and safety of clients (effectiveness) while not being overly burdensome on the providers of care (efficiency). This paper highlights how effectiveness and efficiency are tied together and in how efficiency efforts can overshadow effectiveness under certain conditions.

Basic Tenets of Effective and Efficient Monitoring Systems3

Fiene, Ph.D., Senior Research Psychologist, Research Institute for Key Indicators (RIKILLC), Professor of Psychology (ret), Penn State University, & Senior Consultant, National Association for Regulatory Administration (NARA).

Contact Dr Fiene at Fiene@RIKInstitute.com or RFiene@NARALicensing.org or rjf8@psu.edu

Linear versus Non-Linear Reality

Monday 9 April, 2018

Here are some notes that I hope will generate a good deal of thinking about how we approach reality given some random observations about data (mathematics and statistics), psychology (public policy) and physics (time and space). This is very different from my other posts on this blog but it does tie in nicely with my data prediction research I have been doing for a really long time within the public policy sector dealing with regulatory compliance and administration.

Linear and Non Linear Reality1

Fiene, Ph.D., Senior Research Psychologist, Research Institute for Key Indicators (RIKILLC), Professor of Psychology (ret), Penn State University, & Senior Consultant, National Association for Regulatory Administration (NARA).

Contact Dr Fiene at Fiene@RIKInstitute.com or RFiene@NARALicensing.org or rjf8@psu.edu

Research Projects Over the Past 40 Years

Monday 9 *April*, 2018

I have had the opportunity to work on some very interesting projects over the past 40 years+ as a research psychologist and professor. I have worked with many National Organizations; Federal, Local and State Agencies; and private human service agencies during my professional career. But probably the best project I ever worked on was with Royal Caribbean Cruise Line where we were asked to assess their youth activity programs (aka child care). What was so much fun with this project was the data collection phase where the only way to collect data was to be booked on seven day cruises. Now that was a blast!!

I was still at Penn State and directing the Capital Area Early Childhood Research and Training Institute when this project come to fruition and I still remember the day when I mentioned to the faculty and staff of the Institute that we had a new project. This always got them excited because it meant additional work for staff who were busy all the time. But when I started to describe this new project with Royal Caribbean, suddenly eyes of discontent turned to scenes of royal blue waters.

The staff of Royal Caribbean were first class and a joy to work with. I will not mention names because I have not asked their permission to include them in this blog but all of them from the Director of Global Security to the Captains of the Ships were all highly professional.

The other wonderful outcome of this project was that the standards we developed a portion of them were adopted by the CLIA – Cruise Line International Association for all Youth Sponsored Programs for all their members which numbered about 30 cruise lines. I wished getting standards adopted were as easy for early care and education back in the states.

ECPQI2M Research Articles

Monday 9 *April*, 2018

The following three journal articles published in 2013, 2015, and 2017 focus on the key components of ECPQI2M – Early Childhood Program Quality Improvement and Indicator Model in regulatory program compliance (1IJCCEP), program quality via Quality Rating & Improvement Systems (QRIS)(2ECRQ), and Early Care and Education professional development (3JPEDHC).

- **1IJCCEP**
- **2ECRQ**
- **3JPEDHC**

Fiene, Ph.D., Senior Research Psychologist, Research Institute for Key Indicators (RIKILLC), Professor of Psychology (ret), Penn State University, & Senior Consultant, National Association for Regulatory Administration (NARA).

Contact Dr Fiene at Fiene@RIKInstitute.com or RFiene@NARALicensing.org or rjf8@psu.edu

Assorted Flyers and Brochures Describing RIKILLC, ECPQI2M, KI, QI, RA, and DM

Tuesday 17 *April*, 2018

Here are an assortment of flyers and brochures developed by the Research Institute for Key Indicators LLC (RIKILLC) and the National Association for Regulatory Administration (NARA) describing the Early Childhood Program Quality Improvement and Indicator Model (ECPQI2M), Key Indicators (KI), Quality Indicators (QI), Risk Assessment (RA), and Differential Monitoring (DM).

- Research Institute for Key Indicators LLC (RIKILLC) Flyer
- National Assocation for Regulatory Administration (NARA) Brochure
- NARA Key Indicator Brochure
- Key Indicator Systems Flyer
- Targeted Measurement Tools Flyer
- Parents Guide to Child Care

Ordinal Scaling in Licensing Measurement

Monday 30 *April*, 2018

I have attached a short technical paper (TRC Ordinal Scale Licensing Measurement) on moving from the predominant licensing measurement paradigm which measures rules and standards at a nominal scale level to an ordinal scale level. By introducing this alternate paradigm for licensing measurement it opens up many avenues of analyses, changes in how licensing decision making is done, and potentially combines licensing and quality measurement as one system rather than two systems as it exists now. This last point will be very controversial because of the existing standards and measurement system that has separate systems for licensing and quality rating & improvement systems (QRIS). Both systems have their own staffs, infrastructure, rewards, and sanctions when monitoring the rules and standards in each of the respective systems. The proposal presented in this paper is to have just one system, with one staff, one infrastructure that provides a continuum from regulatory compliance to program quality based upon selected licensing key indicators and quality key indicators that represent specific rules and standards. This will be the first in several technical papers to develop this concept more fully.

May
2018

Pubs, Docs, Pres for State Licensing Administrators

Sunday 6 *May*, 2018

Here are a series of publications, documents, technical notes, and slides for licensing administrators related to licensing measurement & systems, and regulatory compliance to keep in mind as they design and implement their monitoring systems:

- LICENSING MEASUREMENT CHAPTER2
- Instrument-Based Program Monitoring for Child Welfare
- ECPQIM Overview
- ECPE for State Licensing Administrators
- 1ECPQIM PRESENTATION
- 1bTRC Technical Research Notes
- 1aTRC Technical Research Notes
- 1995 ZTT

June 2018

Fiene Algorithm for Generating Regulatory Compliance Key Indicators (RCKI)

Thursday 7 June, 2018

Here is the most recent simplified version of the Fiene Algorithm for Generating Regulatory Compliance Key Indicators (RCKI)

. Add up regulatory non-compliances for all programs, agencies, jurisdictions, etc...

. Review Regulatory Compliance history sorted from high to low

. Nominal (Compliance(1)/Non-Compliance(0)) or ordinal measurement (Gradient(1-5)) scaling

. Take Risk Assessment Weighting (1-9) into account and apply to nominal or ordinal scaling.

. Top 25% (High Group) and bottom 25% (Low Group) of regulatory compliance scores

. Drop out the middle 50% of regulatory compliance scores

. Develop a 2 x 2 matrix which includes each regulation by the High Group and Low Group

. Cells of the Matrix: A = High Group + Programs in Compliance on Specific Regulation

. B = High Group + Programs out of Compliance on Specific Regulation

. C = Low Group + Programs in Compliance on Specific Regulation

. D = Low Group + Programs out of Compliance on Specific Regulation

. W = Total Number of Programs in Compliance on Specific Regulation

. X = Total Number of Programs out of Compliance on Specific Regulation

. Y = Total Number of Programs in High Group.

. Z = Total Number of Programs in Low Group

. Use the following formula: ((A)(D)) – ((B)(C)) / sqrt ((W)(X)(Y)(Z)) = RCKI

. Result will range from –1 to +1

. +.5 to +1.0 will be included as Regulatory Compliance Key Indicators (RCKI). All other regulations will not be included.

Regulatory Compliance Skewness and Scaling for Decision Making

Thursday 14 June, 2018

Here are two technical research notes/short papers on regulatory compliance skewness and scaling for decision making. The first note deals with the issues associated with the terrible skewness found in regulatory compliance data while the second research note proposes a scale that could potentially be used for making licensing decisions based upon the results from the first research note.

. Regulatory Compliance Skewness

. Regulatory Compliance Decision Making Scale

NARA's Key Indicator System: Facilitated Dialogues this Friday, June 15th

Thursday 14 June, 2018

Key Indicator System: Facilitated Dialogues this Friday, June 15th

Join Dr. Fiene and NARA at

3-4pm AT |2-3pm ET |1-2pm CT |12-1pm MT | 11-12pm PT | 10-11am AKT

Child Care | Adult Care | Child Welfare

NARA is excited to present facilitated dialogues on Key Indicators with Dr. Rick Fiene, the father of the Key Indicator System. The Key Indicator System methodology applies across all licensing areas; these dialogues allow licensing professionals across child care, adult care, and child welfare to discuss the application and theory of Key Indicators as they increase efficiency and effectiveness of existing licensing systems.

2018 Meeting Details

Months: March, June, and September**Duration:** 60 minutes**Date/Time:** June 15 at 2-3pm ET

Every effort will be made to find a date that works for all participants, however, if you cannot join a meeting: 1) you may submit questions in advance for Dr. Fiene to answer, and 2) NARA will send you the discussion recording.

September's meeting will be held *both* in person for those attending seminar and via conference call line.

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About Dr. Rick Fiene

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NARA's Key Indicator Facilitated Dialogues to Continue at their Licensing Seminar in Williamsburg, Virginia, September 24-26.

Saturday 16 June, 2018

The second NARA Key Indicator Facilitated Dialogues session was held yesterday (June 15, 2018) in which Dr Fiene discussed the evolution of the Early Childhood Program Quality Improvement and Indicator Model, the Differential Monitoring Logic Model and Algorithm, and his latest Regulatory Compliance research. The third session in this series will be offered at ***NARA's Licensing Seminar to be held in Williamsburg, Virginia, September 24-26, 2018.***

NARA will be highlighting, in addition to the Facilitated Dialogues, several sessions on Key Indicators for participants. Dr Fiene will be presenting with Dr Sonya Stevens on the innovative work Dr Stevens has been doing in the State of Washington related to key indicators, risk assessment, differential monitoring, and regulatory compliance. ***For those who are interested in NARA's Licensing Seminar, please go to their website. If interested in the Facilitated Dialogues, please go to the following website – http://www.naralicensing.org/key-indicator-facilitated-dialogues.***

nara RIKI

Caring for Our Children Basics

Monday 25 June, 2018

Caring for Our Children Basics has fallen off the radar screen when it comes to monitoring, regulatory compliance and standards development in early care and education (ECE). This is a very important set of standards that has distilled the most critical standards from several significant national documents. ACF had intended its use as a basic voluntary set of standards for all ECE programs. I really don't want state licensing administrators to lose sight of this document as they think through and revise their state ECE rules/regulations.

Here is a link to the ACF Webpage: Caring for Our Children Basics ACF Webpage

Here is the document itself: Caring for Our Children Basics Document

Here is the tool that accompanies *Caring for Our Children Basics*: CFOCB Tool

Generic Key Indicators from Regulatory Compliance, Professional Development and Quality Rating Improvement Systems

Monday 25 June, 2018

I get asked all the time what are the most salient generic key indicators from all the various sectors of the early care and education system, such as regulatory compliance/licensing, professional development and quality rating improvement systems (QRIS). I have mentioned in this blog over the years that I have maintained a national data base for an Early Childhood Program Quality Improvement and Indicator Model (ECPQI2M) for the past 40 years which has data from these major systems. In these systems I have generated key indicators over the decades to look at trends and what were the most important standards that statistically predicted quality and child outcomes. In the past, these key indicators have focused more on regulatory compliance/licensing and have appeared in ACF and ASPE publications. More recently, I have been able to apply the same key indicator methodology to professional development and QRIS system. So here is the list of the ***seven generic key indicators*** from these various systems in addition to regulatory compliance/licensing that we should focus on:

. ***All children are properly immunized (licensing)***

1. ***Teachers & Director have ECE degrees (licensing)***
2. ***Competent supervision at all times (licensing)***
3. ***Families are fully engaged (QRIS)***
4. ***Coaching occurs (professional development)***
5. ***Teacher's guide children's behavior (QRIS and Environmental Rating Scales)***
6. ***Teacher's respond to children's communication (QRIS and Environmental Rating Scales)***

July
2018

A Parent's Guide to Choosing Safe and Healthy Child Care

Saturday 7 July, 2018

For those who follow my RIKI Website and Blog, I have in two previous RIKI Blogs posted ***Generic Key Indicators for Early Care and Education*** and ***Caring for Our Children Basics*** for state administrators. In this blog, I want to post a guide (A Parent's Guide for Choosing Safe and Healthy Child Care) that has been around a long time and disseminated all over the world and is based upon 40 years+ of research in which the indicators within the guide have been studied extensively in a host of replication studies. I would recommend parents to use it when visiting potential child care programs before making a final decision on where they would want their child cared for, or for parents who have their children in child care already. For others, who follow this blog, please share with parents who may be making a child care decision. As I said above, what is unique about this parent's guide is the number of replication studies that have been completed validating the indicators within the guide.

Two Newspaper Articles on Unlicensed Child Care and Home Based Child Care

Friday 13 July, 2018

The following two links provide interesting newspaper articles for parents and policy makers that fit nicely with my two previous blog posts on ***Caring for Our Children Basics*** and the ***Parent's Guide to Choosing Safe and Healthy Child Care.***

Unlicensed Child Care

http://www.theintell.com/news/20180712/hiding-in-plain-sight-pennsylvania-turns-blind-eye-to-unlicensed-child-care/1

Home Based Child Care

http://www.theintell.com/news/20180712/bristol-township-home-child-care-providers-explain-why-state-licensing-matters/1

ECPQIM – Early Childhood Program Quality Improvement and Indicators Model Data Base

Tuesday 31 July, 2018

Here is the article and comprehensive data base for the ***Early Childhood Program Quality Improvement and Indicator Model (ECPQIM)*** I have been suggesting to use as a systems

approach for monitoring and evaluating early care and education programs.

- ECPQIM – Early Childhood Program Quality Improvement and Indicator Model Article
- ECPQIM – Early Childhood Program Quality Improvement and Indicator Model Data Base

Validation of Regulations in Three States Using Stepping Stones to Caring for Our Children as Our National Comparison

Tuesday 31 July, 2018

The past several posts to this blog have dealt with standards, rules/regulations, ***Caring for Our Children***, and unlicensed child care. This specific post presents some initial analyses of doing a validation study of regulations in three states using as the national comparison tool ***Stepping Stones to Caring for Our Children (Stepping Stones). Stepping Stones*** is a risk assessment listing of standards taken from the larger ***Caring for Our Children*** book which focuses only on those standards that place children at greatest risk of morbidity and mortality.

In doing this validation study I assumed that there would be a high agreement between the 122 ***Stepping Stones*** standards and the respective regulations in the three states. Oh, was I ever disappointed!! There was **50% to 67%** agreement between the ***Stepping Stones*** standards and the respective state regulations which means a gap of one-half to one-third. Please keep in mind that these are standards that if they are not met place children in the greatest risk of mortality and morbidity. Very sobering to say the least.

August 2018

Washington State's Early Care & Education Research Agenda

Monday 20 August, 2018

It is with great excitement that I share with you today two very significant publications from the **Washington State's Department of Children, Youth and Families** which outline their research agenda for licensing of early care and education programs. These publications are ground breaking in that they address many of the key systemic issues that states are dealing with related to licensing and program quality today.

These publications provide a state example of how best to apply public policy analysis to regulatory and standards development, validation and implementation. They provide a blueprint to follow as state administrators deal with the complex task of rule formulation within the context of differential monitoring involving risk assessment and key indicators. Washington State has provided actual study examples to Zellman and Fiene's (2012) *Conceptual Framework for Validation* by applying it to licensing and regulatory compliance.

Washington staff have creatively utilized legislation to align several sets of standards, a goal that has had difficulty coming to fruition in many other states. This is a public policy approach that is both cost effective and efficient. Building upon this base, they have been able to craft a plan to test both validity and reliability of the data and decisions being made related to regulatory compliance, program quality and child outcomes.

- Washington State's Research Agenda
- Washington State Research Agenda Supplemental Material

Washington State has always been a leader in utilizing *NARA's Key Indicator Methodology* as being one of the first states to fully implement such a system by utilizing the *Fiene Indicators* as part of their abbreviated tools. Washington State staff continue to work with the **National Association for Regulatory Administration (NARA)** and the **Research Institute for Key Indicators (RIKI)** in building and refining their differential monitoring system.

Theory of Regulatory Compliance Models

Saturday 25 August, 2018

Attached to this blog is a technical research note outlining the three theory of regulatory compliance models that have been used over the past 40 years describing the essence of this theory. It is interesting to note that the three models moved from a linear relationship to a non-linear relationship to a tiered relationship between individual key indicators and overall regulatory compliance & program quality.

Here is the technical research note with graphic displays:

Theory of Regulatory Compliance Models

September 2018

National Association for Regulatory Administration's Licensing Seminar in Williamsburg, VA (Sept 24-26)

Wednesday 19 September, 2018

The National Association for Regulatory Administration's Licensing Seminar was held in Williamsburg, Virginia from September 24-26th along with the Expert Licensing Panel hosted by the National Center for Early Childhood Quality Assurance from September 26th-27th.

Here is the URL – NARA Licensing Seminar and the schedule – NARA Seminar – Schedule at a Glance

Response to a presentation from the Seminar: LinkedIn

My colleague, Dr Sonya Stevens, after our joint presentation on the Theory of Regulatory Compliance at the NARA Licensing Seminar:

October 2018

Follow-Up Detail to the Three State Standards Validation Using Stepping Stones as a National Standard

Wednesday 3 October, 2018

Below I have a hotlink to a chart and graphic display which provides additional detail to an earlier RIKI Blog post on a three state standards validation study using ***Stepping Stones to Caring for Our Children***. The chart provides the specific number of standards by the major categories within ***Stepping Stones to Caring for Our Children***. This gap analysis provides a template/model for doing these types of analyses with all states and jurisdictions. I would encourage states and jurisdictions to do this type of validation gap analysis related to validating their rules in comparison to ***Stepping Stones to Caring for Our Children***.

Three State Standards Validation Study by Fiene & Stevens

For additional information about this validation study, please don't hesitate to contact: ***Dr Richard Fiene, Psychologist/Principal Investigator, Research Institute for Key Indicators (http://RIKInstitute.com) (Fiene@RIKInstitute.com). Dr Sonya Stevens, Washington State Licensing Analyst was Co-Principal Investigator.***

Child Care Licensing Study Trend Analysis

Wednesday 3 October, 2018

After returning from a stimulating week at the National Association for Regulatory Administration's (NARA) Licensing Seminar and the Expert Licensing Panel hosted by NARA and the National Center for Early Childhood Quality Assurance (NCECQA), I learned about a new resource made available by the Child Care and Early Education Research Connections (CCEERC). The resource makes all the data over the past decade from the ***Child Care Licensing Studies*** conducted by NARA and NCECQA available as SPSS data files. I started to mine these data as soon as I got back and plan on posting several blogs on this website over the winter months looking at trends in the data over the past decade.

There are five data points from 2005 – 2014. The data base provides a national window into child care licensing in both center based and home based care. I will start with the centers data base and then move to the home data bases. Here is my first look at the center data base related to licensed capacity, number of centers and average size of centers. As I said, I will be selecting variables and posting results overtime looking at trends over the five data points. If anyone has any pressing questions that they are interested in seeing how things have changed over the past

decade, please don't hesitate to get in touch with me at *Fiene@RIKInstitute.com*.

Child Care Licensing Study CCC Licensed Facilities 2005-2014

December

2018

The Importance of Immunizations

Thursday 6 December, 2018

Having children properly immunized is a very important goal within public health. It helps to protect children's health. Within early care and education programs, immunizations are both a standard of care as well as an outcome of that care. Recently, as I have been doing additional in-depth analyses of the national data base that RIKILLC – Research Institute for Key Indicators maintains, having children properly immunized has been and continues to be a key indicator rule that statistically predicts overall regulatory compliance with all early care and education rules. This is a result that appeared in the research literature over 40 years ago and is still present in today's analyses. It helps to account for approximately 70% of the variance related to statistically predicting regulatory compliance. These results are across the USA and Canada.

So why is an immunization standard or rule such a good discriminator of high performing early care and education programs. Keeping track of children's immunizations is not an easy task. It is very detailed-oriented which takes a great deal of diligence on the individuals doing the tracking. One can assume that the best programs have figured this out while the mediocre programs who have difficulty with regulatory compliance have not.

Evolution of Differential Monitoring

Thursday 13 December, 2018

Attached please find a Technical Research Note on the Evolution of Differential Monitoring with special emphasis on Key Indicators and Risk Assessment.

Evolution of Differential Monitoring

Theory of Regulatory Compliance and Quadratic Regression

Tuesday 25 December, 2018

Here is a RIKIllc brief technical research note on the Theory of Regulatory Compliance and quadratic regressions:

Theory of Regulatory Compliance and Quadratic Regression

January

2019

Data Distributions for the Major ECE Systems: Licensing, QRIS, and ERS

Saturday 5 January, 2019

I thought it important to share with researchers who may be doing ECE research on Licensing, QRIS – Quality Rating and Improvement Systems, and ERS – Environmental Rating Scales. Usually when we are doing research, we find the data to be normally distributed which is the case with ERS data sets. However, in dealing with Licensing and QRIS data sets, this is not the case. With Licensing data we find the data distributions to be highly skewed and with QRIS data we find the data distributions to be either bi-modal or highly skewed depending on if only the QRIS sites are used or the full complement of sites statewide. Attached is a brief technical research note which depicts these data distributions for consideration when doing future research by licensing researchers.

Data Distributions for Licensing QRIS and ERS

Relationship between Regulatory Compliance and Complaints in a Human Services Licensing System: RIKIllc Technical Research Note #65

Monday 14 January, 2019

What is the Relationship between Regulatory Compliance and Complaints

Richard Fiene, Ph.D.

January 2019

Within licensing measurement and the validation of licensing systems it is particularly difficult to have specific outcome metrics that can be measured within a human services licensing system. The purpose of this technical research note is to propose a potential solution to this problem.

Probably the most accurate measures of licensing outcomes focus on improvements in the health and safety of clients within human services licensed facilities, such as: fewer injuries (safety) or higher levels of immunizations (health). Another measure related to client satisfaction is the number of complaints reported about a licensed facility by clients and the general public. The advantage of using complaints is that this form of monitoring is generally always part of an overall licensing system. In other words, the state/provincial licensing agency is already collecting these data. It is just a matter of utilizing these data in comparing the number of complaints to overall regulatory compliance.

The author had the opportunity to have access to these data, complaint and regulatory compliance data in a mid-Western state which will be reported within this technical research note. There are few empirical demonstrations of this relationship within the licensing research literature. The following results are based upon a very large sample of family child care homes (N = 2000+) over a full year of licensing reviews.

The results of comparing the number of complaints and the respective regulatory compliance levels for specific family child care homes proved to show a rather significant relationship ($r = .47; p < .0001$). This result is the first step in attempting to understand this relationship as well as developing a methodology and analysis schema since directionality (e.g., did the complaint occur before or after regulatory compliance data collection?) can play a key role in the relationship (this will be developed more fully in a future technical research note). The focus of this research note was to determine if any relationship existed between regulatory compliance and complaint data and if it is worth pursuing.

It appears that looking more closely at the relationship between complaint and regulatory compliance data is warranted. It may provide another means of validating the fourth level of validation studies as proposed by Zellman and Fiene's OPRE Research Brief (*Zellman, G. L. & Fiene, R. (2012). Validation of Quality Rating and Improvement Systems for Early Care and Education and School-Age Care, Research-to-Policy, Research-to-Practice Brief OPRE 2012-29. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services*) in which four approaches to validation are delineated for Quality Rating and Improvement Systems (QRIS). This author has taken this framework and applied it to licensing systems (F*iene (2014). Validation of Georgia's Core Rule Monitoring System, Georgia Department of Early Care and Learning*) and more recently proposed as the framework for Washington State's Research Agenda (*Stevens & Fiene (2018). Validation of the Washington State's Licensing and Monitoring System, WashingtonDepartment of Children, Youth, and Families).*

For additional information regarding the above studies, the interested reader should go to **RIKInstitute.com.**

Fiene, Ph.D., Professor of Psychology (ret), Penn State University; Senior Research Consultant, National Association for Regulatory Administration (NARA); and Research Psychologist, Research Institute for Key Indicators (RIKIllc).

Some Technical Considerations in Using Complaint Data and Regulatory Compliance Data: RIKIllc Technical Research Note #66

Monday 14 January, 2019

Some Technical Considerations in Using Complaint Data and RegulatoryCompliance Data: RIKIllc Technical Research Note #66

Richard Fiene, Ph.D.

January 2019

As promised in RIKIllc Technical Research Note #65, this Note will provide details on the and analytical considerations when using complaint and regulatory compliance data together. As pointed out in the previous technical research note, using complaint data as a potential outcome appears to have merit and should be explored in greater detail. However, with that said there are some parameters that the methodology has that should be explored in order to make the analyses more meaningful.

When looking at regulatory compliance and complaint data there are four possibilities: 1) the facility is in full compliance and has no complaints; 2) the facility is in full compliance but has complaint(s); 3) the facility has some non-compliance and has no complaints; and 4) the facility has some non-compliance and has complaint(s). These four possibilities can be depicted in a 2 x 2 matrix:

Cell C = Full Compliance & No Complaints; Cell A = Full Compliance & Complaints (False Negative): Cell B = Non-Compliance & No Complaints; Cell D = Non-Compliance & Complaints. (*See the attached Technical Research Note for a clearer picture of the 2 x 2 Matrix*).

In the this 2 x 2 matrix, we would want to see cell C and cell D as the predominant cells and cell A and B as the less dominant cells, especially cell A because this represents a false negative result.

However, there are a couple of limitations to the above matrix that need to be taken into account. One, are the complaints substantiated or not. Any complaint must be substantiated to be counted in the model. If it is unsubstantiated, than it is not counted in the matrix. Two, there is the problem with directionality that needs to be addressed. For example, does the complaint occur before or after the full inspection in order to determine regulatory compliance. The 2 x 2 matrix and the modeling for these analyses is based on the complaint occurring after the full inspection and that is the reason for cell A being labeled a false negative. If the directionality is reversed and the full inspection occurs after a complaint, cell A is no longer a false negative.

RIKI Technical Details

Boston Globe Article

Monday 21 January, 2019

The following article appeared in the Boston Globe this morning:

With New Day-Care Inspection System, High Caseloads and Shorter Visits – The Boston Globe

Dissertation on the Effectiveness CCR&R Services Using a Coaching Model on Licensing Compliance

Tuesday 29 January, 2019

Here is an interesting Early Care and Education Dissertation completed by a doctoral student at the University of South Carolina, Wenjia Wang. "The purposes of this study were to investigate the significance of the impact of CCR&R services using a coaching model on licensing compliance outcomes at child care centers and to further our knowledge on the use of coaching to improve health and safety conditions in child care environments."

February 2019

The Relationship between Regulatory Compliance and Quality Initiatives: RIKIllc Technical Research Note #67

Friday 1 February, 2019

The Relationship between Early Care & Education Quality Initiatives andRegulatory Compliance: RIKIllc Technical Research Note #67Richard Fiene, Ph.D.February 2019

Over the past couple of decades there has been many early care and education initiatives, such as Quality Rating and Improvement Systems (QRIS), Professional Development, Training, Technical Assistance, Accreditation, and Pre-K programs to just name a few. Validation and evaluation studies have begun to appear in the research literature, but in these studies there has been few empirical demonstrations of the relationship between these various quality initiatives and their impact on regulatory compliance or a comparison to their respective regulatory compliance. This brief technical research note will provide examples of these comparisons taken from the Early Childhood Program Quality Improvement and Indicator Model (ECPQI2M) Data Base maintained at the Research Institute for Key Indicators (RIKIllc).

I have written about this back in 2014 (Fiene, 2014) in how the various quality initiatives were having a positive impact on the early care and education delivery system but at that point regulatory compliance data were not available. Today, in 2019, with many changes and developments in state data systems, this is no longer the case. Now it is possible to explore the relationships between data from the various quality initiatives and licensing. Several states in multiple service delivery systems have provided replicable findings in which I feel comfortable reporting out about the relationships across the data systems.

What we now know is that there is a positive and statistically significant relationship between regulatory compliance and moving up the QRIS Quality Levels. In other words, facilities have higher compliance in the higher QRIS Quality Levels and lower compliance in the lower QRIS Levels or if they do not participate in their state's respective QRIS ($F = 5.047 – 8.694$; $p < .0001$).

Other quality initiatives, such as being accredited, shows higher compliance with licensing rules than those facilities that are not accredited ($t = 2.799 – 3.853$; $p < .005 – .0001$).

This is a very important result clearly demonstrating the positive relationship between regulatory compliance and quality initiatives. I have some additional state data sets that I will add to the ECPQI2M data base and will continue to analyze these relationships and post additional RIKIllc Technical Research Notes.

Richard Fiene, Ph.D., Senior Research Consultant, National Association for Regulatory Administration; Psychologist, Research Institute for Key Indicators; and Affiliate Professor, Prevention Research Center, Penn State University, Professor of Psychology (ret), Penn State University. (http://rikinstitute.com).

NARA Presentation in Indiana on Differential Monitoring and Key Indicators

Friday 15 February, 2019

NARA – National Association for Regulatory Administration conducted a presentation in Indiana on differential monitoring and key indicators (February 14, 2019). Please go to the following Facebook Live link to see the presentation:

Facebook Live Link

Updating the Theory of Compliance with Big Data Analysis via the Key Indicator Methodology

Monday 25 February, 2019

There is a major movement within the human services involving big data where rather than selecting samples to do analyses state/provincial agencies have the capability to provide basically population data. For the Theory of Regulatory Compliance as it involves the Licensing Key Indicator Methodology, selection criteria and the dichotomization of data are changing dramatically because of the increased cell sizes in determining and generating the Licensing Key Indicators.

For example, in the past, the Licensing Key Indicator Methodology always utilized a 25/50/25 dichotomization model for segregating high compliance from low compliance facilities. However, with big data being available, cell sizes are much more robust in which this dichotomization model can be increased to 12.5/75/12.5. The move to this model helps to decrease the number of false negatives while at the same time increasing phi coefficients. By doing this, the Licensing Key Indicators generated are very robust and highly predictive.

The following Licensing Key Indicators continue to be identified in state/provincial analyses and results (all these Indicators are from the original *ASPE Research Brief: 13 Indicators of Quality Child Care*):

- Proper Supervision,
- Children are properly immunized,
- The facility is hazard free,
- Reporting of child abuse, and
- Staff are trained in CPR and first aid.

March
2019

Child Care Aware of America's Child Care Licensing Database Report

Monday 4 March, 2019

Child Care Aware published a very significant report (*Child Care Aware of America's Child Care Licensing Database: Initial Findings*) on state licensing throughout the USA. It builds upon their innovative reports "*We Can Do Better*". This new report series utilizes *Caring for Our Children Basics* as the comparison tool in looking at the state's licensing rules and monitoring systems. It is an absolutely brilliant approach to being able to look at state's rules from a national perspective and I applaud Child Care Aware for taking this on. Here is a copy of the report and links to their webpage which contains additional information about the child care licensing data base.

- Child Care Aware Licensing Report
- Child Care Aware Licensing Data Base Launch
- Child Care Aware Licensing Data Base

Richard Fiene, Ph.D., Research Psychologist, Research Institute for Key Indicators (RIKIllc); Professor of Psychology (ret), Penn State University; Affiliate Professor, Penn State Prevention Research Center; Senior Research Consultant, National Association for Regulatory Administration (NARA).

Effectiveness and Efficiency Relationship

Thursday 21 March, 2019

RIKI Technical Research Note #70 – Effectiveness and Efficiency Relationship with resultant Cost Benefit Analysis modeling based upon data from the Theory of Regulatory Compliance. This technical research note depicts a graphic display of the relationship between effectiveness and efficiency and how the intersection of these two can result in cost benefit analysis.

RIKI Effectiveness and Efficiency Relationship1

Dr Richard Fiene, Research Psychologist and Professor of Psychology (ret) at Penn State University is generally regarded as the leading international researcher/scholar on licensing measurement and systems. His theory of regulatory compliance has altered regulatory science and licensing measurement dramatically in thinking about how best to monitor and assess licensing rules and regulations.

Dr Fiene's measurement and monitoring methodologies have led to targeted or abbreviated inspections in all aspects of human service licensing thru risk assessment, key indicators and differential monitoring approaches. He has maintained an international data base on regulatory compliance for the past 40 years which is housed at the Research Institute for Key Indicators (RIKIllc) and the Pennsylvania State University and has led to the development of statistical techniques for dealing with highly skewed, non-parametric data distributions. His research has led to the following: identification of herding behavior of two year olds, national early care and education quality indicators, mathematical model for determining adult child ratio compliance, Solution to the Trilemma in Child Care Delivery Services, Stepping Stones to Caring for Our Children, Online coaching as a learning platform, Validation framework for licensing systems, and an Early Childhood Program Quality Improvement Model.

He has written extensively on regulatory compliance in the human services and his research has been disseminated all over the world via his website (http://RIKInstitute.com). He presently directs the Research Institute for Key Indicators and is a senior research consultant with the National Association for Regulatory Administration, and is an Affiliate Professor with the Edna Bennett Pierce Prevention Research Center, Consultant to the College of Medicine at Penn State Hershey and the College of Ag. Sciences at Penn State University.

April
2019

New Saskatchewan and NARA Project Demonstrating the Efficacy of ECPQIM and Differential Monitoring

Friday 5 *April*, 2019

It is exciting to announce a new differential monitoring project in the Province of Saskatchewan, Canada being done by NARA – National Association for Regulatory Administration. This project will assist the Ministry of Education in developing a full blown differential monitoring system with key indicators, risk assessment rules, and quality indicators along with the validation of each. It will be a full evaluation of the ECPQIM – Early Childhood Program Quality Improvement and Indicator Model (please see the following webpage (https://rikinstitute.com/ecpqim/) for additional details about the model. This project will get back to the original purpose of differential monitoring in providing a balance between licensing indicators and quality indicators being used in tandem during abbreviated monitoring reviews. This approach of combining key indicators with risk assessment rules focuses on children's health, safety and well-being developmentally.

I will be providing updated RIKI Notes as we move along with the project delineating the various phases.

nara
RIKI LLC

Dr. Philip Zimbardo gives talk at Penn State Harrisburg

Saturday 20 *April*, 2019

Dr. Philip Zimbardo is an influential psychologist best-known for his 1971 Stanford prison experiment. Many psychology students may also be familiar with his psychology textbooks and the *Discovering Psychology* video series often used in high school and psychology classrooms. Zimbardo is also the author of several notable books including *The Lucifer Effect*.

I had the distinct honor to be invited to a dinner hosted by the Penn State psychology faculty for Dr. Zimbardo this week. Here is a photo of Dr. Zimbardo and the faculty & guests.

THE PENNSYLVANIA STATE UNIVERSITY · 1855 ·

iLookOut Child Abuse Prevention Program: An Online Learning Program for Protecting Children

Friday 26 *April*, 2019

The ***iLookOut Child Abuse Prevention*** program has clearly demonstrated that it significantly improves knowledge about abuse, and attitudes regarding what is needed to protect children from harm and has resulted in individuals feeling better prepared to respond to child maltreatment. Now it has also been demonstrated that ***iLookOut*** improves reporting to child protective services, with significantly more reports resulting in findings of abuse and/or referral for social services. Here is an Infographic describing the program and its significant results.

iLookOut Infographic

May

2019

Journal of Regulatory Science: A Treatise on Regulatory Compliance

Monday 13 May, 2019

The ***Journal of Regulatory Science*** is publishing "*A Treatise on the Theory of Regulatory Compliance (Fiene TRC JRS 7 2019)"* this month (Volume 7)(doi.org/10.21423/jrs-v07fiene). This article presents the latest research and thinking in how this theory impacts regulatory science and compliance within social and economic regulations. Here is the link to the ***Journal of Regulatory Science,*** look under ***Policy Commentaries:***

Journal of Regulatory Science, Volume 7(1)

or just go directly to the article

(doi.org/10.21423/jrs-v07fiene)

Dr Richard Fiene, Research Psychologist and Professor of Psychology (ret) at Penn State University is generally regarded as the leading international researcher/scholar on licensing measurement and differential monitoring systems. His theory of regulatory compliance has altered regulatory science and licensing measurement dramatically in thinking about how best to monitor and assess licensing rules and regulations.

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Exchange Leadership Initiative

Monday 20 May, 2019

I got this wonderful news today, it is truly an honor to be included:

Dear Rick,

Congratulations – you have been chosen to be an Exchange Leader. *You will be included in the article featuring our newest Exchange Leaders in the* ***July/August issue of Exchange magazine.***

The ***Exchange Leadership Initiative (ELI)*** *launched in November 2014, with the intention of making leadership more visible in the field of Early Care and Education. Our early childhood field has strong leaders who accomplish the important work of educating young children, as well as supporting and advocating for children, their families, and their communities. Exchange Leaders are everywhere, doing powerful work in their communities, regions and across the world.*

You are joining the more than 300 current Exchange Leaders. Your passion for the field and your commitment and perseverance over the years is important to the work we all do. I welcome you and look forward to working with you.

Sincerely,

Pam Boulton, Ed.D.

Coordinator, Exchange Leadership Initiative

News from the Edna Bennett Pierce Prevention Research Center at Penn State

Thursday 23 May, 2019

Here is the latest news (May 23, 2019) from the Edna Bennett Pierce Prevention Research Center at Penn State University highlighting events, faculty, staff, students, and affiliates.

News and Updates from PRC Faculty, Staff, Students and Affiliates

June

2019

iLookOut to appear in the Journal of Early Child Development and Care

Saturday 8 June, 2019

A description of the **iLookOut Program for Child Abuse Prevention** will appear in the ***Journal of Early Child Development and Care***.

It was published online yesterday, June 7, 2019. Below is the journal *eprint.*

Ilookout for child abuse conceptual and practical considerations in creating an online learning programme to engage learners and promote behaviour

Preparation for Washington State's Validation Study Kick Off Meetings Next Week

Monday 17 June, 2019

I am in the midst of preparing to fly to Seattle next week to be part of the **Washington State's Validation Study Kick Off (NARA WA Validation)** meetings in Olympia. This is a really big deal in early care and education licensing because the state is expanding the use of weighted risk assessment in making licensing decisions. In the past, weighted risk assessment has been used for making determinations about individual rules or regulations and about the frequency of monitoring visits. Washington state's licensing office has always been at the forefront of monitoring innovations in being one of the first states to utilize licensing key indicators which has been part of their overall differential/abbreviated monitoring for many years now. According to my records, they have the longest running use of licensing key indicators than any other state or province.

Washington has been working with the **National Association for Regulatory Administration** on their weighted risk assessment project for the past couple of years and the next 1-2 years will be devoted to validating their approaches. The interested reader can find out more details about *Washington's Research Agenda* by going to **RIKInstitute.com.** I will also be providing updates over the next couple of weeks during my time in Seattle and Olympia. This is another major step in moving the regulatory science field forward when it comes to regulatory compliance, licensing measurement, and differential monitoring systems.

An interesting discussion during my time in Washington (RAM1)(NARA WA Validation PPT).

Capital Area Early Childhood Training Institute Reunion

Thursday 27 June, 2019

We had a wonderful reunion of many of the staff and faculty from Penn State CAECTI – Capital Area Early Childhood Training Institute. It was wonderful seeing everyone again. Here is a picture from the reunion.

July
2019

A Theory of Early Childhood Outcomes

Tuesday 9 July, 2019

Attached is a technical research note/abstract (RIKInote #75) on proposing a theory of early childhood outcomes based upon the combined impacts of professional development, program quality, and regulatory compliance. This is an attempt to combine these major systems into a single unified equation in determining their relative weights for early childhood outcomes. This is a controversial proposal but one based upon 50 years of research and empirical evidence, all taken from the Research Institute for Key Indicators' Early Childhood Program Quality Improvement and Indicators Model data base.

TECO Fiene July 2019a

Exchange Leadership Initiative – New Exchange Leaders Announced

Thursday 18 July, 2019

The July-August 2019 Issue of the ***Child Care Exchange*** Magazine was just published and I have the distinct honor to be included as one of the new Exchange Leaders announced in this edition of the magazine. I feel humbled to be included with such a wonderful group of ECE professionals who are doing great work with young children.

Attached is the article that appeared in the magazine announcing the new Exchange Leaders and the Exchange Leader Webpage site:

Exchange Leadership Initiative Article

The Exchange Leaders

August 2019

Economic Application Utilizing the Theory of Regulatory Compliance

Thursday 8 *August*, 2019

Here is an article published in the ***Academic Journal of Economic Studies*** utilizing the Theory of Regulatory Compliance (Fiene, 2016; 2019). The study appraises the quality of compliance upheld by selected Nigerian and Ghanaian manufacturing companies to minimum disclosure requirements of IFRS during financial reporting. Hence, it determines whether any significant difference exists in the compliance quality of the post IFRS Financial Statements prepared in Nigeria and Ghana in their first five years of IFRS adoption. It is an empirical study that is descriptively designed to pave room for the use of the content analysis scoring system as the core instrument for data collection.

The study recommends that a more robust regulatory oversight on companies' full compliance to IFRS disclosure requirements be upheld towards achieving a commendable level of comparison in both countries' IFRS Financial Statements as expected. More so, companies' consistent full compliance to IFRS requirements should hence be adopted as one of the prerequisites for there continued listing by the Nigerian and Ghana Stock Exchanges.

Academic Journal of Economic Studies

Three RIKI Technical Research Notes for Scientists, ECPQIM Data Distributions, and Principles of Regulatory Compliance Measurement

Friday 9 *August*, 2019

Listed in this RIKINotes blog are three ***RIKIllc Technical Research Notes*** for psychological scientists (geared for all scientists considering research with regulatory compliance data)(1), ECPQI2M (Early Childhood Program Quality Improvement and Indicator Model) data distributions(2), and proposed principles of regulatory compliance measurement(3). These three technical research notes help to further delineate the nuances and idiosyncrasies of regulatory compliance data, measurement, and analysis.

1. ***ECPQIM Regulatory Compliance Methods and Practices for Scientists***
2. ***ECPQIM DB Data Distributions***
3. ***Principles of Regulatory Compliance Measurement***

September 2019

NARA Annual Licensing Seminar

Friday 20 September, 2019

The **National Association for Regulatory Administration (NARA)** annual licensing seminar is next week. It brings together key researchers, policy administrators, and licensing staff and administrators to discuss the latest developments in regulatory administration and science. Attached is an overview highlighting the presentations for the week. Please pay particular attention to the presentation by Lisa Clifford and Dawn Downer on ***Differential Monitoring Through Data Driven Decisions***. They have done a wonderful study in the state of Indiana in the development of a Licensing Key Indicator system and did some very interesting analyses in comparing licensing data with their QRIS system. Many jurisdictions can learn about very effective and efficient data utilization from their approach.

NARA Licensing Seminar 2019 Schedule of Presentations

CCDF Resource Manual and Differential Monitoring Algorithms

Friday 27 September, 2019

Below please find links to the ***CCDF Resource Manual*** which is a tremendous resource to state agency administrators as they are busy complying with the standards of the Child Care Development Fund. The Office of Child Care has done a wonderful job in putting in one place a ton of resources that are readily available.

The second link is a series of papers that present the algorithms for putting in place a differential monitoring system. It provides all the details for state agency Information Technology (IT) staff to get such a system up and running. Again it provides one stop shopping for state administrators if they are interested in developing such a system.

CCDF Fundamentals Resource Guide

Differential Monitoring Algorithm Papers

January 2020

Public Library of Science PLOS One: The iLookOut Research Study

Saturday 11 January, 2020

Attached is the latest research article detailing the **iLookOut Study and Program, Penn State, College of Medicine, Center for the Protection of Children**:

Generalizing findings from a randomized controlled trial to a real-world study of the iLookOut, an online education program to improve early childhood care and education providers' knowledge and attitudes about reporting child maltreatment

Abstract

In recent years, real-world studies (RWS) are gaining increasing interests, because they can generate more realistic and generalizable results than randomized controlled clinical trials (RCT). In 2017, we published a RCT in 741 early childhood care and education providers (CCPs). It is the Phase I of our *iLookOut for Child Abuse* project (*iLookOut*), an online, interactive learning module about reporting suspected child maltreatment. That study demonstrated that in a RCT setting, the *iLookOut* is efficient at improving CCPs' knowledge of and attitudes towards child maltreatment reporting. However, the generalizability of that RCT's results in a RWS setting remains unknown. To address this question, we design and conduct this large RWS in 11,065 CCPs, which is the Phase II of the *iLookOut*. We hypothesize replication of the earlier RCT findings, i.e., the *iLookOut* can improve CCPs' knowledge of and attitudes toward child maltreatment reporting in a real world setting. In addition, this RWS also explores whether demographic factors affect CCPs' performance. Results of this RWS confirmed the generalizability of the previous RCT's results in a real world setting. It yielded similar effect sizes for knowledge and attitudes as were found in the earlier RCT. Cohen's d for knowledge improvement was 0.95 in that RCT, 0.96 in this RWS; Cohen's d for attitude improvement was 0.98 in that RCT, 0.80 in this RWS. Also, we found several significant differences in knowledge and attitude improvement with regard to age, race, education, and employment status. In conclusion, *iLookOut* improves knowledge and attitudes of CCPs about child maltreatment prevention and reporting in a real-world setting. The generalizability of the initial RCT findings to this RWS provides strong evidence that the *iLookout* will be effective in other real world settings. It can be a useful model for other interventions aimed at preventing child maltreatment.

PLOS One Public Library of Science Research Article

February 2020

Fiene to Receive "VOICE for Children Distinguished Career Award"

Sunday 23 February, 2020

Dr Richard Fiene will be receiving a Pennsylvania Association for the Education of Young Children ***VOICE for Children Distinguished Career Award (PennAEYC Award Announcement)*** in April of this year. Dr Fiene's career spans 5 decades from the early 1970's until the present day. He has spent his professional career in improving the quality of early care and education in various states, nationally, and internationally both at the public policy and academic levels. He has done extensive research and publishing on the key components in improving child care quality through an innovative early childhood program quality indicator model of training, technical assistance, quality rating & improvement systems, professional development, mentoring/coaching, licensing, risk assessment, differential program monitoring, key indicators/regulatory compliance, and accreditation which has led to a cost effective and efficient approach to data utilization and child outcomes.

Dr Fiene is a retired professor of human development & psychology (Penn State University) where he was department head and founding director, along with Dr Mark Greenberg, of the Capital Area Early Childhood Research and Training Institute. He is presently President & Senior Research Psychologist for the Research Institute for Key Indicators which he founded in 2013 and continues consulting with early care & education agencies in the US, Canada, and beyond; and with the College of Medicine at the Penn State Medical Center in Hershey, the Prevention Research Center & Better Kid Care Program at University Park.

Dr Fiene is generally 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/clustering behavior in the developmental play patterns of two-year olds, preschool developmental play patterns being applied to adult-child ratio regulatory compliance, national early care and education quality indicators, mathematical model for determining adult-child ratio compliance, solution to the trilemma in child care delivery services, *Stepping Stones to Caring for Our Children*, online mentoring/coaching as a targeted and individualized learning platform, the National Early Childhood Program Accreditation (NECPA), validation framework for early childhood licensing systems and quality rating & improvement systems, an *Early Childhood Program Quality Improvement Model*, Theory of Regulatory Compliance, *Caring for Our Children Basics: Health and Safety Foundations for Early Care and Education*, and to the development of statistical techniques for dealing with highly skewed, non-parametric data distributions in human services licensing systems (child care, child-residential, and adult-residential)(**National Association for Regulatory Administration (NARA) Key Indicators)**.

March 2020

Developmental Time/Space Continuum Theory: The Dimensionality of Space, Time as Space in Motion, and the Spatial Acquisition Device (SAD)

Friday 20 March, 2020

I am going to make a very different post this time versus my past blogs in this column. What I am sharing: ***Developmental Time/Space Continuum (DT/SC) Theory*** (see attached technical research note below) is something I have been working on for some time now. It is presented here as a "thought piece", a preliminary technical research note that I would love to begin a dialogue about. I have always had an interest in cognitive development as a research psychologist and how we develop our basic concepts of time and space. This led me to do a great deal of reading of Piaget's Theory of Cognitive Development and Epistemology as well as in the physical sciences. There still is much work to be done on DT/SC but I wanted to get some feedback from others and that is the reason for posting it on this blog.

DTSC + SAD + 4States Serial Notes

Emergency Child Care

Tuesday 24 March, 2020

Here is a concept paper on the need for emergency child care because of the COVID-19 pandemic and how best to meet the need:

CARING FOR OUR CHILDREN AND EMERGENCY CHILD CARE FOR ESSENTIAL WORKERS

The two papers mentioned in the above concept paper are posted here for your viewing:

Honor the Early Childhood Education Workforce

In the Eye of the Storm

And here is the URL to the LinkedIn Post by Peggy Pizzo on Emergency Child Care:

LinkedIn Post by Peggy Pizzo

April 2020

Licensing Principles for Emergency Child Care

Thursday 2 *April*, 2020

Based upon conversations that have been occurring at the national level I wanted to share the following principles that I think apply to licensing of emergency child care:

1) We need to rethink the philosophy of "Do No Harm" and replace it with "Unavoidable Risks". Emergency child care is in the eye of a perfect storm of risk and the best we will be able to do is reduce, but we will not be able to prevent the spread of this virus.

2) *Stepping Stones to Caring for Our Children,* the key standards from the larger set of *CFOC* standards that place children at greatest risk of mortality and morbidity need to be the reference point for licensing administrators as they think about regulating this new temporary service of emergency child care.

3) The most stringent adult-child ratios are critical in reducing the spread of the virus, following *CFOC Standard 3.6.2 (Child Care for Ill Children)* for ratios is recommended with the exception of babies under one year where a 1:1 ratio is recommended.

4) Adult-child ratio needs to be the new group size standard/rule in emergency child care. In other words, if the ratio is 3:1, the group size is 3 children, not 6 children. We need a new metric that measures contact hours.

5) Regulation of square footage, which generally averages 35 square feet in family child care homes and child care centers, needs to be increased to 144 square feet in any setting (home, center, school, YMCA/YWCA, preschool, etc..) in order to abide by the distancing requirement of 6 feet.

Formulae for a Contact Hours Metric to be Used in Emergency Child Care Technical Research Note

Sunday 5 *April*, 2020

In an earlier email posted on emergency child care, there was mention about the need to develop a new metric dealing with contact hours. The attached short technical research note provides a methodology for developing such a metric:

Since monitoring of programs will not be occurring during the COVID19 pandemic are there ways to measure compliance without actually needing to do observations in facilities, such as centers or homes. There is when it comes to adult child ratios and group sizes by using a metric which uses the number of contact hours (CH) and determining if there is any relationship to COVID19 infections. And it involves asking the following six questions:

1. **When does your first teaching staff arrive or when does your facility open?**
2. **When does your last teaching staff leave or when does your facility close?**
3. **Number of teaching/caregiving staff?**
4. **Number of children on your maximum enrollment day?**
5. **When does your last child arrive?**
6. **When does your first child leave?**

After getting the answers to these questions, the following formulae can be used to determine contact hours (CH) based upon the relationship between when the children arrive and leave (TH)

and how long the facility is open (TO):

CH = ((NC (TO + TH)) / 2) / TA

CH = (NC x TO) / TA

CH = ((NC x TO) / 2) / TA

CH = (NC2) / TA

Where: CH = Contact Hours; NC = Number of Children; TO = Total number of hours the facility is open; TA = Total number of teaching staff, and TH = Total number of hours at full enrollment.

By knowing the number of contact hours (CH) it will be possible to rank order the exposure time of adults with children. This metric could then be used to determine if greater contact hours is correlated with the increased risk of the COVID19 virus, for example. The following chart can be used by entering the following metrics (example in the table is based upon 5 enrolled children (NC)): the facility is open for 10 hours (TO) and then various scenarios are played out for how long the facility is at full enrollment (TH). Based upon these metrics an outcome rubric can be used where less CH is a positive (+), while high CH is a negative (-). For simplicity, the following chart is based upon one teaching staff (TA) being present (1:5 Adult-Child Ratio).

Contact Hour Score Generated from Above 4 Formulae and Potential Outcomes (COVID19 Infections)

Contact Hours – CH Score
Formulae for CH Score
Potential Outcomes

25

(5 (NC) x 10 (TO)) / 2
+

37.5

(5 (NC) (5 (TH) + 10 (TO)) / 2
+ / –

50

5 (NC) x 10 (TO)

-/ +

62.5
5 (NC) x 12.5 (TO)
–

Formulae for a Contact Hours Metric to be Used in Emergency Child Care Technical Research Note

Here is an update to the above Technical Research Note with a Conversion Table generating Relatively Weighted Contact Hours and a series of research notes (first paper) and an Excel Spread Sheet for actually do the calculations and generating results (second paper):

CHACR Fiene 4-24-20

CHACR Formula Models3 Excel Spreadsheet

New iLookOut Publication on Cognitive Mapping

Thursday 9 April, 2020

The **iLookOut Research Team** from the College of Medicine, Penn State Hershey, Bloomsburg University, New York University, and the University of Oklahoma have recently had their research into cognitive mapping published in the ***Journal of Distance Education and e-Learning.*** Please see the article below describing this research:

Journal of Distance Education and e-Learning

May
2020

Child Care Trilemma Out of Balance

Monday 4 May, 2020

The Child Care Trilemma of Affordability, Availability, and Quality had reached somewhat of a balance over the past 50 years since its original identification. However, recently in the quest to get child care programs back up and running, the balancing act of these three concepts appear to be a bit ajar. Since the COVID19 pandemic closed down the majority of child care in the country with the exception of emergency child care for essential workers, there has been a great deal of discussion on how best to move forward within national forums. I have had the distinct honor to be included in many of these discussions.

What is beginning to worry me as I listen to others debate the rebooting of child care are the positions regarding the Child Care Trilemma Balance seem to be shifting to more emphasis on the affordability and availability (quantity) side of the equation with quality somewhere in the rear view mirror. There is no doubt in my mind that child care is going to be a driving force to getting the general workforce back to work, but I hope we don't regress 50 years to the same political dichotomization of child care as a workforce support for parents ***or*** a child development service for children.

Ten Principles for Reopening Early Care and Education Programs

Tuesday 12 May, 2020

1) It appears that "distancing" is a key element in the spread of the virus. Square footage, staff-child-ratio and group size are the three standards/regulations that probably have the most impact on "distancing". Chances are the fewer staff and children in place together in the largest space will help to mitigate the spread of the virus. We need to move our "Do No Harm" to "Mitigated Unavoidable Risks" as our safety philosophy during this pandemic. Square footage, staff-child-ratio, and group size form a "Prevention Triangle" in attempting to keep kids safe during a pandemic in practicing "distancing". It is not perfect but it may help to prevent some cases. We know that kids don't social distance well, so we need to prepare the environment to help this to happen or at least increase the chances that it will occur. It will be more about "reducing risks" rather than "preventing risks".

2) Keep group sizes to 10 or fewer children.

3) Increase square footage to the greatest possible level. This could be done by limiting the number of children at a particular site – think in terms of a family child care home model but having it at a child care center. Use the group size as a cohort and do the introduction of only one cohort at a time within a center based program. Only use self-contained classrooms. The largest classroom that is available at the site, it will be easier for supervision.

4) Start with the older children, so that the ratio of staff to children can be maintained at 10-1 or 8-1 safely as per *Caring for Our Children* standards. Younger children who will require addi-

tional staff will be introduced after we see how well the older children with one adult do.

5) Limit the number of hours in keeping the facility open. It is all about contact hours and exposure times.

6) In the classroom, spread the group out by placing activity areas/learning centers as far apart as possible. Expand the group. Design developmentally appropriate activities that can incorporate masks and distancing. Engage in more solitary or parallel play rather than group activities, just like toddlers do naturally in their developmental play patterns. Mix up indoor and outdoor activities. If there is only one group/cohort at each center there will be no need to worry about mixing of different groups.

7) Have teachers practice non-developmentally appropriate interactions by practicing safe distancing and not getting eye to eye with the child when interacting. This will help with mitigating the spread of the virus so that if the child sneezes it will not be close to the teacher's face. Along with masks, issue smocks for each teacher to wear, they will be easier to wash if they do become infected.

8) Have the state licensing agency keep track of how programs are doing by using Fiene's "Contact Hour Methodology" to determine any overpopulation situations. Also, it could be an excellent tracking tool for future planning during a pandemic in answering questions about potential thresholds when it comes to the amount of contact hours between staff and children. Go to http://rikinstitute.com for details.

9) By keeping group sizes to 10 or less it would be easier to transport the children because of the smaller numbers and practicing distancing in a van.

10) After a month or so and there are no outbreaks of the virus and staff are getting more comfortable & less stressed, add another cohort to the center in a separate self-contained classroom and follow the same steps as listed above.

Washington State Pilot Study Demonstrates Effectiveness of Contact Hours Metric in Determining COVID19 Potential Infections in Child Care

Tuesday 26 May, 2020

An exciting development has occurred in a child care pilot study in the state of Washington in which a new monitoring methodology appears to be able to build a metric that is effective at determining potential COVID19 infection rates. The results need to be expanded and replicated but it appears that by using a new metric called "Contact Hours" instead of group size, it is possible to build a screening tool that takes into account time, space and numbers of individuals and provides a Conversion Table based upon the number of children, adults, and time of exposure and placing these data into a series of equations with the result, the higher the "Contact Hours", the higher the potential infection rate.

It uses a color coded (red, yellow, green) traffic light pattern in which as the "Contact Hours" increases, it correlates with the potential spread of the COVID19 virus. Red indicates "Highest Potential"; Yellow indicates "Mid Range Potential"; and Green indicates "Lowest Potential". The "Contact Hour" modeling and formulas take into account both exposure time as well as density distributions of individuals. The "Contact Hour" metric is much more effective and efficient than

either measuring group size or staff-child ratios alone or in combination.

The Washington child care validation pilot study is attached here:

Washington Child Care Contact Hour Validation Pilot Study

The authors of the study are now interested in fine tuning the methodology to determine the exact thresholds in the "Contact Hours" models which can statistically predict the potential spread of the virus.

ECE Validation Studies Completed in Washington State and the Province of Saskatchewan

Wednesday 27 May, 2020

Two large scale early care and education validation studies were completed in the state of Washington and in the Province of Saskatchewan demonstrating the effectiveness and efficiency of the differential monitoring approaches of risk assessment and key indicators.

Attached below are the two studies:

NARA Saskatchewan Validation Studies

NARA Washington Validation Final Report

These studies are extremely important because they demonstrate that differential monitoring as encouraged by CCDBG/CCDF via risk assessment and key indicator methodologies is an extremely valid approach to ECE licensing and program monitoring.

June
2020

The Washington State Foster Care Study

Sunday 21 June, 2020

The state of **Washington Department of Children, Youth, and Families** just published a significant foster care pilot study utilizing an innovative key predictive methodology.

A mixed method correlational exploratory pilot was conducted in Washington State to determine items within the home study assessment that could be used as indicators to identify baseline requirements of the assessment and suggest anticipated depth (expansion or reduction) within the required topic(s). The purpose of the home study is to assess the caregiver(s)' ability to provide a safe home, the quality of care needed by children and an environment that is nurturing, respectful and supportive. The goal of this study is to identify predicative indicators that will assist in the development of a home study that will increase consistency within home studies and decrease timeliness of completion.

The use of predictive indicators may have the potential to reduce subjective decision making as well as identify inconsistencies when determining the recommendation of approval or denial of a home study. Additionally, with a carefully designed home study system inclusive of predictive analytics, it is possible to reduce the amount of time an assessor uses to approve or deny a home study, saving agency time and resources. Finally, by using focused technical assistance with those applicants who need more or specific support, the use of predictive indicators may increase the success of timely placement and permanency goals. This mixed method study included a case review of 207 home studies where 19 primary and secondary themes emerged as significant. It lays the ground work for methods used to identify predictive elements within the assessment process. Preliminary results are provided along with further recommendations.

Please see the following link to learn more about this research study:

https://authors.elsevier.com/a/1bGP3hNfKp8GF

July
2020

COVID19 Daily Infection Rates: "The Tale of Two Trends"

Thursday 2 July, 2020

COVID19 Daily Infection Rates: The Top 25 Countries and Trends in the Data

"The Tale of Two Trends"

Richard Fiene, Ph.D.

July 2020

I have been monitoring the COVID19 daily infection rates since the Johns Hopkins University site was established (https://coronavirus.jhu.edu/map.html) and two very different trends in the data have clearly emerged over the past 6 months which I find very unsettling.

The two trends (daily cases trend line) are the following: 1) A very positive trend in that cases did spike but since the spike have decreased significantly and are either at a very low level or continue to decrease. This is a good trend and one we had hoped for early on when the pandemic was first identified. However, there is a second trend 2) A very negative trend in that cases did spike but have plateaued out and are not decreasing or they are still increasing. This is not what we wanted to see. I am not going to conjecture into why this has occurred but I only want to list the countries in these two groups because maybe we can learn from the Group 1 countries.

I looked at the top 25 countries with the highest COVID19 daily infection rates in the aggregate (Total Confirmed Cases). Unfortunately, the majority of countries are in Group 2 (Negative Result)(n = 18) rather than in Group 1 (Positive Result)(n = 7).

- ***Group 1 (+ Result) = UK, Spain, Italy, France, Germany, Canada, China.***
- ***Group 2 (- Result) = US, Iran, Brazil, Russia, India, Peru, Chile, Mexico, Pakistan, Turkey, Saudi Arabia, South Africa, Bangladesh, Columbia, Qatar, Sweden, Egypt, Argentina.***

So what is so different about these two groups of countries' approaches. Can we learn from Group 1. On the surface they look like a very diverse group from three different areas of the world. Please keep in mind that I only looked at the top 25 countries because they had the largest number of confirmed cases. However, when you analyze the data from all 188 affected countries the two trend lines hold up so again we could continue to search out the Group 1 countries and find out what is different about their approach because it appears to be working a lot better than the Group 2 countries.

Richard Fiene, Ph.D., Research Psychologist, Research Institute for Key Indicators (RIKIllc), rfiene@rikinstitute.com, http://rikinstitute.com.

Proposed COVID19 Mitigation Logic Model

Monday 13 July, 2020

A week or two ago, I posted "A Tale of Two Trends" in which I attempted to show trends in daily COVID19 infection rates for countries that were successful and those that were not. This post deals with a proposed logic model (attached below) that might explain these two trends. The red sequence is not what we want to be doing while the green sequence is what we should be doing. The actual daily infection rates taken from the various countries clearly demonstrate the differences when the appropriate mitigation approaches are not followed.

COVID19 Logic Model

ECPQIM: Early Childhood Program Quality Improvement & Indicator Model Tool and Validation

Thursday 16 July, 2020

Here is a draft of the Early Childhood Program Quality Improvement and Indicator Model Tool (ECPQIM Tool) based upon the key indicator methodology combining indicators from both research on regulatory compliance and program quality over the past 40 years. It represents a major cost effective and efficient advance in how best to monitor early care and education. This tool is being developed in the Ministry of Education, Province of Saskatchewan.

ECPQIM Tool

Also, here is a draft of a report presenting the results of two validation studies in the State of Washington and the Province of Saskatchewan validating the key indicator and risk assessment methodologies in early care and education programs.

Validation Studies

Virtual/Remote Inspections for Early Care and Education Programs

Monday 20 July, 2020

Licensing and Monitoring agencies are beginning to look more at doing "Virtual" or "Remote" inspections because of the COVID19 Pandemic. Attached below is a series of papers dealing with some key elements of this discussion: an introductory statement, NARA "Remote Inspection" Guide, and a checklist on the "13 Indicators Related to Health and Safety" published by ASPE. Here is the introductory statement followed by the full series of papers:

Early Care and Education Virtual/Remote Inspections

Richard Fiene, Ph.D.

The purpose of this paper is to delineate what the key elements for virtual inspections could be given the present COVID19 pandemic. It is suggested as guidance for licensing agencies and other Early Care and Education (ECE) agencies, such as Head Start. Specific rule/standards will

be suggested as well as other possible approaches to conducting virtual inspections. It should be looked upon as a companion document to go along with ***NARA's (National Association for Regulatory Administration) Virtual Inspection*** document (Attached document below).

Obviously, program monitoring via virtual inspections will change the oversight and inspection function of licensing agencies and other agencies responsible for measuring compliance or performance with ECE programs. Here are the key elements and rules/standards that should be emphasized in these virtual reviews. The focus will be on keeping children and staff healthy and safe. Rules/standards related to health and safety should be emphasized, especially those that will prevent the spread of infectious diseases. Also rules/standards that will support and enhance mitigation efforts such as group size, staff-child ratios, square footage should be emphasized.

Specific rules/standards in the following areas:

- *Group size* and Staff-Child ratios;
- *Attendance/Enrollment;*
- *Health and Safety (especially related to the spread of infectious diseases);*
- *Exposure time;*
- *Square footage;*
- *Drop off and Pick Up arrangements;*
- *Transportation;*
- *Mixing of groups and small group activities;*
- *Care for Ill Children;*
- *Fiscal Stability.*

If the above suggested rules/standards review does not work then an alternative approach could be one in which the virtual inspection would focus on the rules/standards in the following tool:

Thirteen ECE Key Indicators **(Attached document below)**

This tool contains statistical key predictor rules/standards that will predict overall compliance. So an agency can administer this tool virtually similar to the suggestions in ***NARA's Virtual Inspection Guide*** and only follow up with those ECE programs which demonstrate non-compliance with any of the rules/standards with the 13 Key Indicators.

ECE Virtual/Remote Inspections Papers

Journal of Regulatory Science Article on a Mixed Method Program Evaluation of a Focused Child Care Monitoring Checklist

Wednesday 22 July, 2020

A very important and significant study was reported in the ***Journal of Regulatory Science****: A Mixed Method Program Evaluation of Annual Inspections Conducted inChildcare Programs in Washington State* by Dr Sonya Stevens.

This mixed method study used a program evaluation to assess the reliability and social validity of the focused childcare monitoring checklist used in Washington State, as well as its social validity in maintaining quality programming in licensed childcare centers. The focused monitoring checklist and interview responses were used to answer two specific research questions: (1) How do stakeholders describe the value, usefulness, and effects of state administrated focused monitoring?; and (2) What is the inter-rater reliability of the focused monitoring tool used to assess the foundational health and safety issues that must be met by state licensed early childhood programs? The study found that licensors and providers found the focused monitoring tool as more efficient and informative than the current differential monitoring system. The use of a checklist focusing on real time compliance increased the value placed on the relevance of the inspection with respect to meeting licensor and provider needs. The results also showed that even with a controlled tool, performance of onsite inspections can vary greatly along a continuum of reliability and objectivity due to licensor rater drift and individual perceptions of licensing procedures. Licensing agencies should consider further evaluation of the monitoring process and the reliability of the checklist tool as the process is implemented statewide, concentrating on the training content and training methods provided to licensors.

Below is the URL for the full article in the journal:

https://journals.tdl.org/regsci/index.php/regsci/article/view/126/193

August

2020

Re-Opening Your Facility and Keeping It Open Safely During A Pandemic

Saturday 8 August, 2020

Here is a creative model to deal with reopening schools, early care and education programs, large group settings, businesses, and then monitoring them over time. Ari Rosner provides us with a brilliant approach to setting up a defined space using distance algorithms. Very unique and clever think-outside-the-box methodology. These models address the number of individuals present, distancing/space, exposure time, and density. It is a perfect example of data utilization at its best. Highly recommended for any facilities or large businesses and agencies:

- ***Rosner-Fiene Model PPT Slide Deck***
- ***Rosner-Fiene Model pdf version***

Updated Health and Safety Briefs from the National Center for Early Childhood Quality Assurance

Tuesday 18 August, 2020

The National Center on Early Childhood Quality Assurance (ECQA Center) is pleased to share an updated series of briefs about the health and safety training topics required in the 2016 Child Care and Development Fund (CCDF) Program Final Rule for all child care providers that receive payment from the CCDF subsidy program.

Licensing and CCDF administrators may find these briefs helpful as they consider revisions to standards for both licensed and license-exempt providers. These briefs may also be useful in developing health and safety guidelines for child care providers during the coronavirus disease 2019 (COVID-19) pandemic—especially the brief about the prevention and control of infectious disease—because all the briefs provide links to best practice guidelines and examples of regulatory language on the topics.

This series of CCDF health and safety requirements briefs, updated in July 2020, provides an overview of national guidelines and state requirements related to the following topics:

· Brief #1: Prevention and Control of Infectious Diseases

· Brief #2: Administering Medications

· Brief #3: Prevention of and Response to Emergencies Due to Food and Allergic Reactions

· Brief #4: Reducing the Risk of Sudden Infant Death Syndrome and Using Safe Sleeping Practices

· Brief #5: Building and Physical Premises Safety

· Brief #6: Emergency Preparedness and Response Planning

· Brief #7: Handling, Storing, and Disposing of Hazardous Materials and Biological Contaminants

· Brief #8: Transportation of Children.

Each brief includes the following:

· Links to relevant standards from *Caring for Our Children Basics: Health and Safety Foundations for Early Care and Education*, which represent the minimum health and safety standards that experts believe should be in place when children are cared for outside their homes

· Links to relevant standards in *Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Early Care and Education Programs, CFOC Online Standards Database*,

which represent best practices with respect to health and safety in early care and education settings and helps programs and providers implement *Caring for Our Children Basics* standards, understand the research and rationale behind the standards, and move to higher levels of quality in health and safety

· Data from the 2017 Child Care Licensing Study about licensing requirements for child care centers, family child care homes, and group child care homes in all 50 states and the District of Columbia

· Examples of regulatory requirements for licensed and license-exempt providers that represent a range of approaches taken by the 50 states, District of Columbia, and 5 territories

· Additional resources and tools to support states, territories, and tribes in the development and revision of health and safety requirements for child care settings.

For additional information and support, please visit the ECQA Center website or email us at QualityAssuranceCenter@ecetta.info.

Office of Child Care

Administration for Children and Families

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Website: http://www.acf.hhs.gov/programs/occ

National Association for Regulatory Administration's 2020 Virtual Licensing Seminar, Sept 14-16, 2020

Thursday 27 August, 2020

nara National Association for Regulatory Administration

2020 Virtual Licensing SeminarSeptember 14-16NARA presents this year's concurrent session schedule for the 2020 Virtual Licensing Seminar! This year we're featuring great conversations centered on the great work that you all do. Check out the sessions highlighted below and register today.**Monday, Sept. 14Concurrent Session A [1:45 – 2:45pm ET]Validation Studies of Licensing Key Indicator Rules and Risk Assessment Rules: State of Washington and the Province of Saskatchewan**Presented by: Rick Fiene, Sonya Stevens, Kim Taylor, Derek Pardy**Establishing Collaborative Relationships in Early Child Care**Presented by: Sharon Woodward**The Joint Commission Behavioral Health Accreditation – QRTP Accreditation Implementation**Presented by: Mary Louise Wei, Colette Bukowski**Piloting a New Bridge to Quality**Presented by: Nakilia McCray, Shannon Carroll**Monday, Sept. 14Concurrent Session B [3:00 – 4:00pm ET]Keeping Children Safe: Trends in Child Care Licensing**Presented by: Sheri Fischer, Tara Orlowski**Licensing and Enforcement in the 21st Century – Innovation, Collaboration, and Data**Presented by: Tyler M Farmer, Sonya Stevens, Judy Bunkleman**Assisted Living**

Regulations During a Pandemic Presented by: Margie Zelenak**Licensing's Role In Supporting the Reduction of Suspension & Expulsion**Presented by: Amy Page, Alexa Watkins**Tuesday, Sept. 15Concurrent Session C [12:30 – 1:30pm ET]Effective Strategies to Regulated Assisted Living Providers**Presented by: Alfred C. Johnson**Working Together to Advance Quality**Presented by: Tara Lynne Orlowski, Ed.D., co-presenters TBA**The Quality Connection: Connecting the Dots for Continuous Quality Improvement**Presented by: Iko Ezell-Blackmon, Catherine Broussard**Remote Inspections: Protecting Health and Safety in Emergency Situations**Presented by: Ron Melusky, Alisa Hendrickson**Tuesday, Sept. 15Concurrent Session D [3:00 – 4:00pm ET]How Stakeholder Collaboration Drives Successful Outcomes for Technology Implementations**Presented by: Michelle Thomas, Martin Bing**Using Licensing Data to Understand Connections Within Early Care and Education**Presented by: Nina Johnson, Kelly Maxwell, Simon Bolivar, Michele Adams**Utilizing Trauma Informed Care Principles in Licensing Inspections**Presented by: Donna Sabo, Joyce Debolt**Coming Together in the Time of COVID**Presented by: panelists TBA**Wednesday, Sept. 16Concurrent Session E [1:45 – 2:45pm ET]Putting the Pieces Together**Presented by: Michele Adams, Jeanne VanOrsdal**Measuring Workforce Competency**Presented by: Tara Lynne Orlowski, Ed.D., Ryan A. Wilke, Ph.D.**An Approach to Tackling Unlicensed Child Care**Presented by: April Rogers, Tahishe Smith**Social Distancing and On-site Inspections – Defining the New Normal**Presented by: Mark ParkerFor more details on each session, check out NARA's website.View the Seminar Schedule-at-a-Glance online.Register today! *NARA has been my professional go-to organization for over 20 years. The availability of knowledge from its members, issue papers, credential, and products has been invaluable. I am looking forward to this year's Seminar, and while I will miss the in-person networking and seeing friends from across the country, I am honored to be part of an organization that is supporting its membership with this free learning opportunity.* **Debby Russo, NARA Board MemberQuestions?** Contact events@naralicensing.org**Follow us on LinkedIn and Twitter!**

National Association for Regulatory Administration400 South Fourth Street, Suite 754EMinneapolis, MN 55415888.674.7052

Campus Tycoons Having A Positive Impact

Saturday 29 August, 2020

Here is a wonderful example of how students are making a positive impact. I have posted about **Pandemic Analytics** in a previous post after learning about their work with schools and businesses. But what really catches your attention in this latest article is the commitment of the team at **Pandemic Analytics**.

As a research psychologist and professor of psychology, I spent a great deal of time working with students similar to the team at **Pandemic Analytics** and whenever I read about how they want to have a positive impact, I am so encouraged that our future will be in good hands.

Take a minute to read the following article (Link or pdf) about what I feel are some of the best and brightest:

https://campustycoons.com/caltech-student-designs-tools-to-help-schools-and-businesses-return-safely-to-in-person-mode/

CalTech student designs tools to help schools

and businesses return safely to in-person modeDownload

Presentation Made in the State of Washington by Stevens & Fiene on New Contact Hour Metric for Tracking COVID19 Infections in Child Care Centers

Monday 31 *August*, 2020

Here is a presentation that Drs Fiene and Stevens did last month to senior leadership in the Department of Children, Youth, and Families in the State of Washington. The presentation highlighted the encouraging results from a pilot study conducted in Washington's Early Care and Education programs by Dr Stevens utilizing the new Contact Hour metric proposed by Fiene. The new metric is being proposed as an innovative virtual/remote measurement strategy to monitor COVID19 infection rates by tracking exposure time, density, and spacing in child care centers.

Here is a copy of the presentation and paper:

Evolution of Contact Hours Metric PPT + PaperDownload

September

2020

Presentation at the NARA Licensing Seminar on Validation of Key Indicators and Risk Assessment in the State of Washington and the Province of Saskatchewan

Tuesday 8 September, 2020

Next week on November 14th, 2020 Dr Fiene will be joining Dr Sonya Stevens from the Washington Department of Children, Youth, and Families; and Kim Taylor and Derek Pardy from the Province of Saskatchewan's Ministry of Education to do a presentation on their respective Validation Studies. The Validation Studies are demonstrating the efficiency and effectiveness of the Key Indicator and Risk Assessment methodologies as they are applied in licensing early care and education programs by using a differential monitoring approach.

Below is the slide deck that will be used for the presentation.

NARA Seminar Validation Pres 2020cDownload

National Meetings and Panels During the Month of September

Wednesday 16 September, 2020

During a two week time frame (Sept 7 – 21), Dr Fiene has had the opportunity to present and discuss pressing issues within early care and education related to COVID19.

The Virtual NARA Licensing Seminar

CCEEPRC Use of Licensing Data

Expert Licensing Panel hosted by the National Center for Early Childhood Quality Assurance

COVID19 Early Childhood Expert Panel hosted by the National Center for Early Childhood Health and Wellness

The Role of Licensing in Early Care and Education Technical Expert Panel

Some Takeaways from the NARA Licensing Seminar

Wednesday 16 September, 2020

There have been several very interesting discussions at the NARA Licensing Seminar that are worth sharing. Here are some takeaways from the various sessions that need highlighting. These highlighted items are pertinent to all human services and not just to early care and education programs and they have a definite monitoring slant:

. Virtual inspections will be of tremendous interest in the foreseeable future in how jurisdictions conduct licensing and monitoring reviews of programs.

. Outcome validation studies will need to be completed in the licensing field to ultimately determine if clients are truly in a safe and healthy setting.

. In doing virtual inspections, is a Key Indicator (KI) or Risk Assessment (RA) approach, which targets specific rules based upon predicting overall regulatory compliance and risk, a better approach than attempting to do comprehensive reviews. In other words, should (KI + RA) be used as a remote screener for more in-depth reviews where rule infractions have been found.

. Limitations about the term "Compliance" and its negative connotations and short changing of programs. This is missing the point, the issue is not "compliance" but rather having "standards that are not high enough". This has been clearly documented in the ***Regulatory Compliance Law of Diminishing Returns***. This concept will be further developed in future RIKINote Blogs.

Key Indicator Webinar Will be Offered This Fall 2020

Wednesday 16 September, 2020

NARA will be doing a Licensing Key Indicator Webinar this Fall 2020. Many of the NARA Seminar participants were asking about this. A date has not been established, but it should be announced by NARA in the coming month or so. Be on the look out. For those of you who would like an introduction, please see the following flyer about Licensing Key Indicators:

NARA-Key-Indicator-FlyerDownload

October 2020

NARA Webinar on Licensing Key Indicator Rules

Friday 9 October, 2020

Dr Fiene will be doing a NARA Webinar on Licensing Key Indicator Rules on October 28th from 1:00 – 2:00pm.

Here are some concepts that Dr Fiene will cover in the Webinar contained in the attached file below:

NARA PRC KIS Webinar1Download

NARA Webinar this week on their Key Indicator Methodology

Saturday 24 October, 2020

Here is the link to register for NARA's Webinar on their Licensing Key Indicator Methodology which will be aired on October 28th:

https://www.naralicensing.org/webinars.

December 2020

Mitigating the Limitations of the Regulatory Compliance Law of Diminishing Returns

Friday 25 December, 2020

A program quality enhancement is presented in the following Technical Research Note which should help to mitigate the limitations of the regulatory compliance law of diminishing returns. It has been noted that there is a ceiling/plateau effect when comparing regulatory compliance to program quality scores. The attached model provides an enhancement that may be a means for alleviating these limiting effects and rebuilds the relationship in a stepped fashion which moves regulatory compliance and program quality from a non-linear to a linear trajectory.

Here is the Technical Research Note and the original paper it is updating:

RC-PQ Grid Model2Download
4RC trc-models1Download

Contact Hour COVID19 Infection Rate Threshold Grid

Friday 25 December, 2020

Several previous posts presented a new contact hour metric for measuring compliance with staff child ratios and for monitoring potential COVID19 infection rates. However, a conversion table had only been proposed for the staff child ratios but not for the potential COVID19 infection rates. This post provides that conversion table. It will still require additional data to confirm its efficacy but at least it provides some guidance in looking at the relationship between the number of individuals present and the exposure time.

Here is the Technical Research Note and the original paper it is an addition to:

CH Infection Rate Threshold Grid1Download
2WACHACR + CH GridDownload

January

2021

Using Science for Formulating ECE Public Policy

Sunday 3 January, 2021

Here are three examples (all dealing with staff to child ratios) of using science in an innovative way to help formulate and guide early care and education (ECE) policy and standards/rules/regulations.

-> The use of developmental play patterns in determining staff child ratios. When caring for young children, toddlers are the most difficult to care for in groups. The reason being that toddlers do not form cohesive groups but rather engage in "herding" behavior. These "herds" are difficult to corral because of short attention spans and parallel play. So, does it make sense when promulgating standards that we reduce the relative size of the group and have fewer children to the teaching staff. Generally staff to child ratios are based upon the chronological age rather than the developmental age or developmental play patterns of the children.

-> In addressing the trilemma of child care (affordability, quality, accessibility) is it possible to alter the staff child ratio for those individual classrooms where we have a very highly qualified teacher (BA or MA in ECE) and increase the staff child ratio by one child. The increased tuition that comes with the extra child being enrolled would translate into a salary increase for the very highly qualified teacher in that respective classroom. In so doing, we address affordability, accessibility and quality in one fell swoop.

-> In determining staff child ratio compliance with the specific number of children to teaching staff in a group or classroom try utilizing a new metric called "contact hours". "Contact hours" determines the number of children in a classroom or group setting and looks at that group with the number of teaching staff present over time. By asking 6 very basic questions, it is possible to calculate the area of a trapezoid to determine via this new metric "contact hours" if the group or classroom is in compliance or not with the specific staff child ratio for the respective age group by the area of the trapezoid. The other intriguing aspect of "contact hours" is that it can be calculated remotely or virtually without needing to do on site observations.

These are just three examples of how we can begin to use science to help us determine empirically how best to design and implement ECE standards/rules/regulations. If you are interested in any of these three examples, please don't hesitate to contact me and I can provide additional documentation.

A Treatise on Essential Early Care and Education

Sunday 3 January, 2021

Here is a proposal for a new approach for reinventing early care and education in the post COVID19 Pandemic era. It is very controversial but one that needs to be put on our radar screen.

After being in the early care and education (ECE) field for approximately a half century, I want to propose a radical departure from how we have designed our ECE systems.

Many national organizations have been suggesting that we take this time because of the COVID19 pandemic and rethink how we want to bring ECE back online building a newer and better system. We do have a unique opportunity to do this since we have lost approximately 25% of ECE as of this writing. However, I am sure what I am about to suggest is not what many of my ECE colleagues had in mind.

It is ironic because what I am proposing is very similar to an idea I had and even proposed to a federal agency practically 50 years ago. It starts with rank ordering the need of ECE and thinking of offering ECE only on an essential basis. By essential I mean for those parent(s) who only really need and want to have ECE services. For those who do not, let's pay them a stipend to stay at home with their child(ren). And this can be either mom or dad. I have not had the opportunity to run the numbers, but I am guessing that my suggestion of providing stay at home stipends could be paid for by the reduction in total need for ECE services since we would definitely see a reduction in the total need for ECE as it relates to out-of-home care. So this could be a cost neutral program.

So rather than trying to replace the 25% we have lost in ECE programs and replacing them with a higher quality version, let's totally think outside-the-box and ask parents if they really want those services or would they prefer to stay at home and raise their children in their own homes. The remaining 75% of ECE programs still will need a quality booster-shot because by best estimates prior to the COVID19 pandemic, only 10% of ECE programs were of a high-quality level.

I know that this is a radical departure from our present thinking both within the ECE advocacy community and I am sure within political circles, but maybe this is exactly the type of proposal we need to reinvent ECE. I know this is not going to be a popular idea but I want to get us thinking more broadly because the thinking so far appears to be centered on fixing an already broken system but mostly staying within the confines of that broken system. Let's really reinvent ourselves and ask parents what they want and need rather than ECE "experts" trying to make this decision for them.

Essential ECE Fiene 2021Download

Child Care Aware of America's Licensing Benchmark Project

Friday 15 January, 2021

Child Care Aware of America (CCAoA) has published a very significant new publication: The ***Child Care Licensing Benchmark Project*** building on the very important work they have been doing over the past 15-20 years related to child care center and home licensing standards at the state level (State Report Cards). This latest project and publication takes that work to the next level. It clearly highlights the importance of ***Caring for Our Children Basics***, the voluntary national standards for health and safety in child care programs.

Here is a copy of the publication:

CCAoA ChildCareBenchmarkLicensingProject-FINAL-11022020Download

I encourage individuals to go to CCAoA's website for additional information regarding this very important and significant project.

Rule Compliance Versus Rule Performance

Saturday 23 January, 2021

Here is a short paper addressing the issue of rule compliance and rule performance which is being discussed a good deal in regulatory science circles. The paper addresses some of the major measurement principles of regulatory compliance, licensing and monitoring systems and their subsequent measurement parameters.

Regulatory Compliance Measurement Principles2Download

This short paper is part of the RIKI Technical Research Note Series maintained at the Research Institute for Key Indicators.

February

2021

Academia Discussants Additional Papers

Saturday 13 February, 2021

Here is the series of regulatory compliance and performance papers organized into an anthology for easy reading. I included the original paper as reference but after that paper all the other papers support and add to this original paper. Also, pay particular attention to the last paper presentation where a performance assessment matrix is introduced.

Rule Compliance and Performance PapersDownload

Feel free to either comment here or on the Academia Discussant Area.

March 2021

RIKI and NARA Renew their Exclusive Licensing Key Indicator Agreement for another 5 Years

Tuesday 16 March, 2021

This past January 2021, the National Association for Regulatory Administration (NARA) and the Research Institute for Key Indicators (RIKI) renewed their exclusive licensing key indicator agreement for 5 additional years. The new agreement has several interesting enhancements. Probably the most significant is the creation of a new course on *Licensing Measurement* that Dr Fiene will be developing for NARA to be offered through their website. The course will be fully self-contained and self-paced for the learner. It will be offered exclusively through the NARA website on their Facilitated Dialogues Web Page (https://www.naralicensing.org/key-indicator-facilitated-dialogues**).**

The renewed agreement continues the successive steps in transferring the differential monitoring, risk assessment and key indicator methodologies from RIKI to NARA so that NARA will become the sole owner and licensor of these methodologies.

Look for updates on this website as well as on NARA's website regarding the new Licensing Measurement course.

NARA to Offer New Course on Licensing Measurement

Tuesday 16 March, 2021

Starting this Fall 2021, NARA – National Association for Regulatory Administration in conjunction with the Research Institute for Key Indicators (RIKI) will be offering a new course, *Licensing Measurement and Systems*. The course is being developed by Dr Richard Fiene, Penn State Professor of Psychology (ret) & NARA Senior Research Consultant. Here are a couple of summary comments about the course:

This course will provide the learner with the major tenets of licensing measurement. The learner will discover as they go through the course 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.

Check back periodically on this website (*http://rikinstitute.com/blog/*) or go to NARA's website at: (*https://www.naralicensing.org/key-indicator-facilitated-dialogues)*.

April
2021

RIKI Technical Research Note on the Licensing Key Indicator Predictor Methodology Threshold Updates, Regulatory Compliance, False Positives & Negatives, Data Dichotomization, and Licensing Measurement

Sunday *4 April, 2021*

Here are two papers dealing with the licensing key indicator predictor methodology, regulatory compliance and licensing management that help to round out some of the latest research in regulatory science utilizing an international database from the Early Childhood Program Quality Improvement & Indicator Model (ECPQI2M). The reader will find some key metrics/parameters related to licensing measurement, especially in the second paper.

Fiene Licensing Key Indicators No Checks 40b 5-1Download
RIKI Tech Res Note 2×2 Matrices2cDownload

May
2021

Licensing Measurement Paradigm Considerations: Performance Assessments, Regulatory Compliance Modeling, Risk Assessment and Weighting

Saturday 8 May, 2021

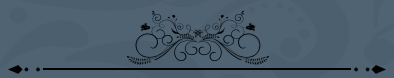
Below is a series of technical research notes dealing with licensing measurement paradigm considerations involving performance assessments, regulatory compliance modeling, risk assessment and weighting. It provides some of the latest thinking related to regulatory compliance and performance assessments as a monitoring continuum rather than as two separate assessments systems.

LM New ParadigmsDownload

Key Regulatory Compliance, Early Care & Education, Licensing Measurement, Program Monitoring Publications

Tuesday 25 May, 2021

1979 Contact Hours MetricDownload
1985 Differential MonitoringDownload
1997 Trilemma SolutionDownload
2000 Licensing MeasurementDownload
2001 Teaching OnlineDownload
2002 Coaching & MentoringDownload
2013 Early Childhood Program Monitoring Indicator ModelDownload
2014 Validation FrameworkDownload
2015 Caring for Our Children BasicsDownload
2016 Head Start Key IndicatorsDownload
2017 Caring for Our Children CoachingDownload
2019 Regulatory Compliance Theory of Diminishing ReturnsDownload
2020 Cognitive Mapping Micro LearningDownload



June
2021

Saskatchewan and Florida Differential Monitoring Projects

Monday 28 June, 2021

Attached below are two reports from Saskatchewan and Florida which delineate their respective experiences with developing differential monitoring systems.

-Saskatchewan Final ReportDownload
–Florida DM Final ReportDownload

Program Monitoring Technical Research Notes related to Regulatory Compliance and Quality Key Elements

Monday 28 June, 2021

Two technical research notes dealing with a paradigm shift related to program monitoring and its subsequent impact on regulatory compliance and quality. These research notes help to develop the key elements, principles, and dimensions when thinking about designing and implementing program monitoring systems.

trc-monitoring-paradigmsDownload
Regulatory Compliance & Quality DifferencesDownload

October

2021

Caring for Our Children Basics: A Brief History of Early Care and Education Standards and their Monitoring in the United States (USA)

Friday 29 October, 2021

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.

December 2021

NRCKids “A Parent’s Guide to Choosing Safe and Healthy Child Care”

Sunday 26 December, 2021

Here is the ***July 2019 National Resource Center for Health and Safety in Child Care and Early Education Guide*** for parents in choosing safe and healthy child care. It is a really nice checklist that should help parents in comparing their child care options. There is space for entering key indicator information for three child care programs.

AParent’sGuideJuly2019Download
I have also attached a draft of a tool (***Early Learning and Child Care Program Quality Key Indicator Instrument***) I helped the Ministry of Education in the Province of Saskatchewan develop based upon quality indicators that I thought would be of interest as well to both parents and to ECE professionals. By using both of these guides, one has key indicators drawn from over 40 years of research into ECE licensing and program quality key indicators.

-Saskatchewan ECPQIDownload

Caring for Our Children

Monday 27 December, 2021

The major publications surrounding ***Caring for Our Children*** dealing with risk assessment and key indicators along with their respective checklists/tools. Each of the publications are listed here for your convenience.

-PPT CFOC ALLDownload
1ASPEDownload
2Parent’s GuideDownload
3BasicsDownload
4Basics ToolDownload
5SS CFOCDownload
6SS ToolDownload
7CFOCDownload

January

2022

Regulatory Compliance Scale

Sunday 9 January, 2022

This blog post will propose a new Regulatory Compliance Scale (RCS)(Fiene, 2022) which should help in making comparisons between regulatory compliance and program quality systems, such as Environmental Rating Scales and Quality Rating & Improvement systems. The proposed scale builds off of a familiar 1-7 Likert scale that has been used a good deal in the early care and education field within program quality instruments/tools. This scale is based upon 40+ years of research into regulatory compliance data distributions which have been reported in this blog (RIKINotes) over the years.

The proposed scale (see **RCS Table** below) has the following structure of full compliance, substantial compliance, mediocre compliance, and low/non-optimal compliance. Numerically it is proposed that full compliance = 0 no rule violations; substantial compliance = 1-3 rule violations; mediocre compliance = 4-9 rule violations; and low/non-optimal compliance = 10+ rule violations. The transformation to a 1-7 Likert scale is as follows: full compliance = 7; substantial compliance = 5; mediocre compliance = 3; and low/non-optimal compliance = 1.

When the above regulatory compliance scale is utilized it substantially reduces the skewness and kurtosis in the regulatory compliance data distribution which is a major problem with all regulatory compliance data distributions and has been reported repeatedly in the human services licensing research literature. The revised or transformed data distribution begins to approach a more normally distributed data set; albeit, not as normally distributed as the various Environmental Rating Scales but significantly better when straight frequency counts are used in determining regulatory compliance. This has been the preferred means of data recording since the introduction of Instrument-based Program Monitoring (IPM) in the 1980's. It is being proposed that the above Regulatory Compliance Scale (RCS)(Fiene, 2022) be used in place of this frequency based data system.

This newly proposed scale should go a long way in making future analyses in utilizing regulatory compliance data more useful and meaningful when making comparisons with the various program quality initiatives present in the early care and education field, such as the Environmental Rating Scales and Quality Rating & Improvement Systems.

RCS	**Definitions/Levels**	**Rule Violations**
7	Full 100% Compliance	0 Violations
5	Substantial Compliance	1-3 Violations
3	Mediocre Compliance	4-9 Violations
1	Low/Non-Optimal Compliance	10+ Violations

Regulatory Compliance Scale (RCS)(Fiene, 2022)

Introducing the Theory of Regulatory Compliance to Neoclassical Economic Theory: Moving from a Linear to a Non-Linear Paradigm

Tuesday 18 January, 2022

In a previous RIKINote (4-8-2018), linear and non-linear models were discussed on a very broad scale. In this note, the Theory of Regulatory Compliance is being suggested as a non-linear paradigm to the dominant neoclassical economic theory and the linear mathematical modeling of econometrics.

The Theory of Regulatory Compliance is based upon several empirical studies conducted in the human services which states that the relationship between regulatory compliance and program quality is not a linear relationship when comparing the upper ends of the compliance x quality continuum. The relationship between regulatory compliance and program quality is linear at the lower end of the continuum when one is looking at non-optimal regulatory compliance up to a mediocre level of regulatory compliance. But once substantial regulatory compliance and full (100%) regulatory compliance are attained, there is a plateau or diminishing return effect when it comes to corresponding program quality levels. In other words, from an outcomes perspective, it is not a worthwhile use of resources to be in full regulatory compliance as versus substantial regulatory compliance. This result has been demonstrated in several studies in the human services field across the USA and Canada.

Why is this an important finding? Because there has always been an assumption that regulatory compliance is a linear variable. But based upon the Theory of Regulatory Compliance, it appears that it is truly a non-linear variable and it would change any mathematical equation within econometrics that introduces regulatory analysis. This could go a long way in explaining many of the disparities in pricing regulations and supply/demand economics where regulations are heavily represented. Could the econometric mathematical modeling be more finely tuned by adding a non-linear paradigm to the formula generation via regulatory compliance?

February 2022

The Latest Controversy in ECE: Failure of Pre-K and We're Surprised?

Saturday 12 February, 2022

I have been reading about the Tennessee Study regarding their Pre-K program and their lack of success. Unfortunately, the goals of the program to help very disadvantaged children gain and sustain those gains overtime did not come to fruition according to the study authors. The latest findings are no surprise and have been demonstrated in many other previous studies involving large scale early care and education (ECE) interventions. However, are we designing the wrong interventions and measuring the wrong aspects of development. Play is and has always been the paramount intervention strategy in early care and education programs. But when we design and implement Pre-K we seem to be more concerned about academics and forget about the need for children to play. Curriculum is critical but the curriculum should be based upon developmentally appropriate practices and child development principles, and it should be play based and not academically focused.

When we are thinking about curriculum and assessment, do we need to shift the paradigm in which assessment comes before the curriculum intervention. Shouldn't the curriculum be driven by each individual child's specific strengths and areas needing improvement. Having a more individualistic approach based upon the needs of the child which helps us to better solve the "problem of the match". There needs to be a more synergistic relationship between assessment and curriculum development and implementation.

The next area that is paramount are the overall qualities of the teachers. Teachers need to have a degree in early care and education and not in elementary education or any other degree that is not child development focused. It can be either an AA or BA degree, ideally an MA but that is probably unrealistic and too costly. But it must be in ECE. In the medical profession you don't want podiatrists doing heart surgery; same thing in ECE, we want ECE teachers teaching in ECE classrooms.

It has become really clear from Quality Rating and Improvement Systems (QRIS) that parent involvement and engagement is a key factor for overall ECE quality and positive child development outcomes. Without parental engagement, 75% of what needs to be accomplished is lost. And the environment that children are spending their days in ECE classrooms needs to be language rich and high quality exchange rates between teachers and children at a verbal level. Real exchange of meaningful dialogue and not commands that are uni-directional from teacher to child; but a real give and take between the child and the teacher. More of a dance rather than regimented marching.

And lastly, Pre-K should not be a separate program but rather one that is integrated with Head Start and child care classrooms. Pre-K classrooms should be part of Head Start classrooms and child care classrooms. We need to break down these structural barriers and have all children fully integrated and not in separate silos based upon funding streams.

New Land Use Study in Kenya utilizing the Theory of Regulatory Compliance

Tuesday 22 February, 2022

Attached to this post is a new land use study completed in Kenya utilizing the Theory of Regulatory Compliance. It was published in the ***International Journal of Human Capital in Urban Management***: *Planning implication of universities growth on land use: Confirmatory evidence from GIS spatial analysis,* by W.O.Omollo, Department of Planning and Development, Kisii University, Kenya.

ABSTRACT

BACKGROUND AND OBJECTIVES: Universities have customarily been seen as agents of development in the regions they serve owing to their roles of teaching, research, innovation and community extension. There is however a dearth of knowledge on how they influence land use change with a specific reference to compliance with planning standards. This paper therefore through a case study investigates the impacts that the growth of Kisii University has on land use change in Nyamage, a neighbourhood where it is situated within Kisii Municipality, Kenya. It subsequently links the observed change to compliance with planning standards.

METHODS: Guided by the theory of regulatory compliance, the study adopted a case study research design with a sample size of 226 drawn from 577 developments in Nyamage. Spatial data on land use change was collected using satellite images from Google Earth covering three epochs of 2005, 2014 and 2021. Analysis was undertaken using GIS. Data investigating compliance with planning standards were conversely collected using an observation checklist, land survey maps and analyzed using a one-sample t-test and paired t-test.

FINDINGS: The study established that in 2005, forest, short vegetation, transitional and built-up areas respectively covered 17%, 39%, 34% and 11%. These by 2021 correspondingly changed by 46%, -10%, -29% and 57% for the forest, short vegetation, transitional and built-up areas. The latter recorded the highest land use change, a condition mainly credited to the hostels built by private developers in an attempt to meet a demand created by students who could not find accommodation within the university. Research findings further disclosed that developments around the university were not complying with the planning standards used in regulating plot sizes, building coverage ratio and road reserves, leading to land use conflicts.

CONCLUSION: The establishment and growth of Kisii University have remarkably influenced land use change, which in the absence of development control contributes to the disregard of planning standards. This is because the government mainly sees universities as an avenue for spurring regional economic growth with less attention on their spatial implications. These findings may enlighten policy-making institutions with critical information for effective planning and development control around universities. The study also fills a gap that hitherto existed on the nexus between land use change and compliance with planning standards as relates to the growth of universities. It additionally enlightens the international audience on how the impacts of universities growth on land use may be evaluated through a triangulation of spatial and statistical approaches.

KEYWORDS: Development control; Kisii Municipality; Land use change; Planning standards; Universities

Kenya Land Use TRC IJHCUM-2111-1474Download

April
2022

Selected Publications

Monday 4 April, 2022

EARLY CARE AND EDUCATION, REGULATORY COMPLIANCE, DIFFERENTIAL MONITORING, PROFESSIONAL DEVELOPMENT, PROGRAM QUALITY INITIATIVES, AND LICENSING MEASUREMENT

Articles and Book Chapters:

- **Regulatory Compliance and Quality Article Journal of Regulatory Science**
- ***Regulatory Compliance Monitoring Paradigms Article Journal of Regulatory Science***
- ***A Treatise on the Theory of Regulatory Compliance Article Journal of Regulatory Science***
- **The Instrument Based Program Monitoring Information System and the Indicator Checklist for Child Care Article *Child Care Quarterly***
- **A Comparison of International Child Care and US Child Care Using the Child Care Aware NACCRRA Child Care Benchmarks – Early Childhood Program Quality Improvement and Indicator Model Article *International Journal of Child Care and Education Policy***
- **Searching for a Solution to the Child Care Trilemma Article *Child Care Information Exchange***
- **Theoretical Model for Computing Adult-Child Ratios in Day Care Centers – Contact Hour Article *National Association for Regulatory Administration News***
- **Improving Child Care Quality Through an Infant Caregiver Mentoring Project Article *Child and Youth Care Forum***
- **Utilizing a Statewide Training System to Improve Child Day Care Quality: the Child Care Early Childhood Development Training System Article *Child Welfare Journal***
- **Child Care Health Consultant Improves Infant and Toddler Care Coaching Article *Journal of Pediatric Health Care***
- **Mastering Course Content and Learner Satisfaction in Early Childhood Education: A Comparison of Regular Classroom Instruction with Three Variations of Internet Delivery Article *Journal of Early Childhood Teacher Education***
- **Comparison of Online Mandated Reporter Trainings *APSAC Article***
- **Generalizing Findings from a Randomized Controlled Trial to a Real-World Study of the iLookOut, an Online Education Program to Improve Early Childhood Care and Education Provider's Knowledge and Attitudes About Reporting Child Maltreatment Article *PLOS ONE***
- **iLookOut Child Abuse: Conceptual and Practical Considerations in Creating an Online Learning Program to Engage Learners and Promote Behavior Change Article *Journal of Early Child Development and Care***
- **An Interative Online Learning Program on Child Abuse and its Reporting Article *Journal of Educators Online***
- **Cognitive Mapping for iLooOut for Child Abuse: An Online Training Program for Early Childhood Professionals Article *The Online Journal of Distance Education and e-Learning***
- **Approaches to Validating Child Care Quality Rating and Improvement Systems (QRIS): Results from Two States with Similar QRIS Type Designs Article *Early Childhood Research Quarterly***

- **Washington Foster Care Study: Identifying Predictive Indicators Article *Children and Youth Services Review***
- **NARA: National Association for Regulatory Administration Licensing Measurement Chapter 2000 Edition**
- **NARA: National Association for Regulatory Administration Licensing Measurement Chapter 2015 Edition**
- **Family Child Care Quality Chapter**
- **American Academy of Pediatrics Chapter**
- **Child Care Early Childhood Development Training System Chapter**
- **National Association for the Education of Young Children and the National Early Childhood Program Accreditation Chapter**
- **National Association for the Education of Young Children Chapter Child Development Outcome Study**

Books, Monographs, Manuals, Guides, Courses, Proposals:

- **Licensing Measurement and Monitoring Systems eHandBook RFiene**
- **Senate of Pennsylvania: Early Childhood Education: Universal Pre-K and Other Alternatives Essay**
- **Zero To Three Differential Monitoring Manual: A Systematic Approach to Child Care Regulatory Review, Policy Evaluation and Planning to Promote Health and Safety of Children in Child Care**
- **Research Institute for Key Indicators Book of Readings 2nd edition – this book of readings contains many of the research reports, papers, and technical notes noted below**
- **ECPQIM/DMLMA RIKI Book-of-readings-3rd-edition 2023**
- **Parents Guide to Healthy and Safe Child Care 2019**
- **Parents Guide to Healthy and Safe Child Care 2015**
- **Instrument Program Monitoring for Child Welfare Book**
- **Instrument Based Program Monitoring IPM Monograph Volume 1**
- **IPM – Key Indicators Monograph Volume 2**
- **Thirteen Key Indicators of Quality ASPE Monograph**
- **Ecological Monitoring Information System Manual EMIS – the original manual for designing ECPQIM**
- **Early Childhood Research and Evaluation for State Administrators Monograph – the first text for state licensing administrators regarding research and evaluation in ECE**
- **CAECTI Infant Toddler Caregiver Coaching Manual**
- **Investing in Our Children – The Path to Quality Monograph**
- **Pennsylvania Early Childhood Training Institute Proposal**
- **National Association for Regulatory Administration NARA Licensing Measurement Course**

Research Papers:

- **Differential Monitoring Logic Model and Algorithm & the Early Childhood Program Quality Improvement and Indicator Model DMLMA-ECPQIM Framework Paper**
- **Differential Monitoring2 Paper**
- **Parent Attitudes Towards School Effectiveness AERA Paper**
- **Pennsylvania Head Start vs Child Care Comparison Paper**

- **Public Policy Analysis for Psychologists Paper**
- **Program Monitoring Children's Services Monitoring Transfer Consortium Paper**
- **Spatial Acquisition Device DTSC 4 States Paper**
- **Stepping Stones Key Indicator Paper**
- **State Regulatory Monitoring and Evaluation Systems Improving Program Quality Paper**
- **Theory of Regulatory Compliance Monitoring Paradigm Paper**
- **Washington Research Agenda: A Blueprint for State Licensing and Regulatory Administration**
- **Washington Research Agenda with Appendices**
- **Validation Studies CCIE paper: Do Abbreviated Inspections Really Work?**
- **National Child Care Benchmarks Paper**
- **National Licensing Monitoring and Evaluation Systems Model Paper**
- **NARA Washington Risk Assessment Matrix: Regulatory Compliance Theory of Diminishing Returns Paper**
- **Measuring Child Care Quality Paper**
- **Making the Impossible Possible – Evaluation of Human Services Paper**
- **Licensure and Program Quality in Child Care Centers and Homes AERA Paper**
- **Licensing Indicators of Quality Paper**
- **KIM Technical Updates Paper**
- **Key Indicators 4 Decades Paper**
- **How On-Site Mentoring Improves the Quality of Infant and Toddler Child Care Providers Paper**
- **Grantee Performance Management System GPMS Environmental Scan Paper**
- **Future LEEDers Going Green in the Child Care Industry Paper**
- **Eye of the Storm Paper**
- **Evolution of Contact Hour Presentation and Paper**
- **Ecological Paradigm ECOPAD: Community Psychology's Search for a Viable Research Paradigm Paper**
- **Emergency Child Care Paper**
- **Contact Hour Metric Paper**
- **Contact Hours WA Infection Grid Paper**
- **Caring For Our Child Basics History Paper**
- **A Multi Dimensional Approach to ECE Quality Assessment American Educational Research Association AERA Paper**
- **Theory of Compliance Canadian Paper**
- **Documenting Children's Development Progress Paper**
- **JRS Measurement1**

Presentations, Webinars:

- **Ontario Tiered Licensing Presentation**
- **Rosner-Fiene Model Presentation: Re-Opening Your Facility and Keeping It Open Safely During the Pandemic**
- **Prevention Research Center ECPQIM Presentation**
- **PRC Prevention Research ECE Slides**
- **Washington Risk Assessment Presentation: Weights and Enforcement**
- **NECQA Monitoring Presentation: Development of Core Rules – Efficient and Effective Monitoring in Licensing**
- **NARA Washington Validation Kick Off Presentation**
- **NARA Minnesota DHS Child Care Regulation Modernization**
- **NARA Theory of Regulatory Compliance Webinar**

- **NARA Saskatchewan-Washington Validation Presentation**
- **NARA Regulatory Compliance Monitoring Paradigm Webinar**
- **NARA Quality Indicators Presentation**
- **NARA PRC Key Indicator System Webinar**
- **NARA Ontario Tiered Licensing Presentation**
- **NARA Licensing Measurement Slides+Notes – these slides are the best place to begin because they provide the overview to Licensing Measurement and Differential Monitoring (PPT160N)**
- **NARA Licensing Measurement Slides – these slides were used when the Licensing Measurement course was first offered by NARA**
- **NAEYC Research Symposium Presentation**
- **GPMS Touchpoint Presentation**
- **GPMS Scoring Presentation1**
- **GPMS Scoring Presentation**
- **Differential Monitoring Presentation: Rethinking How to Best Monitoring Quality in ECE**
- **CLEAR Contact Hour Presentation: Evolution of Contact Hours and COVID19**
- **BUILD Validation Presentation**
- **NARA Course5 Class Slides – these slides are the basis of the NARA Licensing Measurement Course which is part of the Licensing Curriculum, a self-paced online course for licensing administrators and their staff, especially licensing researchers**

Research Reports, Research Briefs:

- **Unannounced vs Announced Licensing Inspections of Child Care Facilities Report**
- **Pennsylvania Child Care Training Needs Survey Report**
- **Parents Attitudes Towards School Effectiveness Report**
- **PA Keystone STARS Evaluation Report**
- **PA Early Childhood Quality Study Report**
- **OPRE Validation Framework for Quality Rating and Improvement Systems Research Brief**
- **NARA Wisconsin Blueprints Report**
- **NARA Washington Validation Report**
- **NARA Saskatchewan Differential Monitoring Report**
- **NARA SK ECQKI Report7com Draft Proposal**
- **NARA Oregon Blueprint Report**
- **NARA Oregon Risk Matrix Report**
- **NARA New York Key Indicator Methodology (KIM) Report1**
- **NARA New York Key Indicators Report**
- **NARA Minnesota Key Indicators Report**
- **NARA Kansas Key Indicator Report**
- **NARA Indiana KIM Report**
- **NARA Hawaii Key Indicator Report**
- **NARA Florida Differential Monitoring Report**
- **NARA Florida Differential Monitoring Key Indicator Validation Report**
- **NARA Colorado QRIS IndicatorsReport**
- **NARA Alberta Report**
- **NARA Alberta QIM Summary Report**
- **NARA Alberta QIM Report**
- **NARA Alberta KIM-RAM-QIM Scoring Report**
- **Mind in the Making Report**
- **MAPS Family Communications Project Evaluation Report**

- **Lycoming Coaching1 Report**
- **Lycoming Coaching Report**
- **Licensure and Program Quality in Child Care Report**
- **Georgia Report3: Family Child Care Home Rule Validation**
- **Georgia Report2: Child Care Center Rules Validation**
- **Georgia Report1: Validation of Core Rules Differential Monitoring System**
- **Foundation for Child Development Professional Development Report**
- **Family Child Care in PA Report**
- **Early Childhood Education Rating Scale ECERS Training Cumberland Co Report**
- **Early Childhood Education Linkage System Report Infant Toddler Program Quality Study Report**
- **Center for Rural Pennsylvania Report: A Comparison of Regulated Child Care in Rural and Urban Pennsylvania**
- **Capital Area Early Childhood Research and Training Institute CAECTI Annual Report 2004**
- **CAECTI Annual Report 2002-2003**
- **Better Kid Care Online Coaching Evaluation Report**
- **Child Care Ecology Measure of Compliance Report**
- **Capital Area Health and Human Development Institute Report**
- **Capital Area Health and Human Development Institute 5 Year Report**
- **Head Start Key Indicator Report**
- **GPMS Testing Plan Report**
- **GPMS Methodology Report**
- **GPMS KIM Report**
- **Caring For Our Children Basics Report**

Posters:

- **PA Early Childhood Program Quality Study Poster**
- **Online Training Poster**
- **National Standards Poster**
- **Infant Toddler Coaching Poster**
- **Eating Behaviors of Young Children Poster**
- **Contact Hours Poster**
- **Child Development Outcome Study Poster**
- **Key Indicators of Quality Poster**
- **NRCEC Session (Active Poster)**
- **ilookout-infographic**
- **ilookout poster**
- **Regulatory Compliance Theory of Diminishing Returns TRC Poster**

Instruments and Tools:

- **Key Indicator Instrument**
- **Saskatchewan Early Childhood Program Quality Indicator Instrument 2020**
- **SK ELCCPQI9L 2023 Draft**
- **Health and Safety Checklist for Early Care and Education Programs based upon *Caring for Our Children* National Health and Safety Performance Standards**
- **GPMS Alpha 2.4 Scoring Protocol Tool**
- **Caregiver Observation Form and Scale COFAS**
- **Child Development Program Evaluation Scale Instrument CDPES**

Technical Research Notes and Abstracts:

- **RC Monitoring Paradigms2 + RC-PQ (1)**
- **Relationship between Regulatory Compliance (RC) & Program Quality (PQ) Research Note**

- **Regulatory Compliance Scoring Scale Research Note**
- **Regulatory Compliance Theory of Diminishing Returns Research Note**
- **Regulatory Compliance – Program Quality Data Distributions Research Note**
- **Regulatory Compliance Program Quality Differences Research Note**
- **Regulatory Compliance Measurement Principles Research Note**
- **Regulatory Compliance and Complaints Research Note**
- **Regulatory Compliance & Complaints Research Note**
- **Theory of Early Childhood Outcomes Research Note**
- **Sensitivity Analysis Matrix Research Note**
- **Regulatory Compliance Key Indicator & Risk Assessment Research Note**
- **Theory of Regulatory Compliance Note**
- **Washington Risk Assessment Matrix Research Note2**
- **Washington Risk Assessment Matrix Research Note1: Risk Assessment and Licensing Decision Making Matrices**
- **Nominal to Ordinal Measurement Research Note**
- **KIS Methods Research Note**
- **India Study Research Note**
- **False Positives & Negatives within Key Indicator Methodology Research Note**
- **Evolution of Differential Monitoring, Risk Assessment, and Key Indicators Research Note**
- **Essential ECE Research Note**
- **Effectiveness Efficiency Research Note**
- **ECPQIM5: Early Childhood Program Quality Improvement/Indicator Model Version 5 Research Note**
- **Differential Monitoring vs Comprehensive Inspections Research Note**
- **Dichotomization of Data Research Note**
- **Enhanced Dichotomization Model Research Note**
- **BUILD Research Note: The Relationship of Licensing, Head Start, Pre-K, QRIS, Accreditation, and Professional Development and their Potential Impact on Child Outcomes**
- **Regulatory Compliance – Program Quality Models**
- **Risk Assessment Indicator Data Analysis Plan Note**
- **GPMS KIM with British Columbia Example Tech Research Note**
- **Child Care Ratios Technical Research Note**
- **Spatial Acquisition Device and Four States of Space**
- **SK ELCCPQI10**
- **Regulatory Compliance Key Indicator Metric and Matrix Revision/Update Tech Research Note**
- **Research Institute for Key Indicators LLC Blog Posts 2013-22**
- ***The following technical research notes and abstracts combine the above notes & abstracts into themes that were used for different audiences. Obviously there will be some redundancy from the notes listed above as well as the introduction of new papers, abstracts, data, and research notes:***
- **Regulatory Compliance – Program Quality Technical Research Notes1**

- **Regulatory Compliance Program Quality & Differential Monitoring Technical Research Notes1**
- **Differential Monitoring Research Notes2**
- **Theory Regulatory Compliance Research Data Notes1**
- **Theory of Regulatory Compliance Algorithm Research Notes2**
- **Academia: Theory of Regulatory Compliance Research Notes3**
- **Technical Research Notes Anthology1**

Early Childhood Program Quality Improvement/ Indicator Model Version5 and the Latest Version of Licensing Measurement Slides

Saturday 9 *April*, 2022

Here are two documents, one, a technical research note on the latest version of the Early Childhood Program Quality Improvement/Indicator Model (V5)(ECPQIM5a) and two, a powerpoint slide presentation on Licensing Measurement (PPT189).

ECPQIM5aDownload
PPT189Download

KIM (Key Indicator Matrix) and RAM (Risk Assessment Matrix) Matrices Integration Into One Platform

Sunday 10 *April*, 2022

This technical research note will integrate the Key Indicator Matrix (KIM) and the Risk Assessment Matrix (RAM) into one platform to clearly demonstrate their statistical modeling overlap. Key Indicators deal with the ability to predict overall compliance or performance based on existing data. Risk Assessment Indicators do not predict but determine a risk score based upon prevalence and severity measures. Their purposes are different but when integrated together the two matrices are a powerful tool in

determining the health of the measured entity.

The below matrix integrates the two matrices of KIM and RAM and shows that KIM scores are generally at the lower end of risk but having sufficient prevalence when it comes to non-compliance. RAM scores have a larger variance and are most concerning at the higher end of the continuum.

KIM x RAM Matrices

KIM
Low Group
High Group
Severity:
Compliance
1
2
3
Low
Non-Compliance
4
5
5
Medium
7
8
9
High
Prevalence:
Low
Medium
High
RAM

For additional information about this matrix, please don't hesitate to contact Dr Fiene at Fiene@psu.edu or RFiene@RIKInstitute.com

Key Indicator Model Statistics and Algorithms

Sunday 10 *April*, 2022

A technical research note is provided for other licensing researchers and statisticians who are interested in replicating the methodology through the use of a alternate statistical software package, such as SPSS, Systat or SAS. The research note provides all the background statistics and algorithms for the generation of a Key Indicator Matrix and results.

KIS Stat and AlgorithmsDownload

A Brief History of Licensing Measurement

Monday 18 *April*, 2022

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: **https://www.naralicensing.org/key-indicator-facilitated-dialogues**

A Guide to the Regulatory Compliance Theory of Diminishing Returns and its Implications for Regulatory Science

Saturday 23 April, 2022

This blog post will attempt to place the Regulatory Compliance Theory of Diminishing Returns into everyday terms addressing its potential implications beyond the human services and suggest how it can be applied anywhere in which standards/regulations/rules are utilized in the public policy domain.

The Regulatory Compliance Theory of Diminishing Returns was first proposed in the 1970's when several studies were conducted comparing regulatory compliance with program quality in early care and education programs. These studies were expanded to include other child residential programs and similar results occurred in which a plateau or diminishing return in the levels of program quality & child outcomes were observed as regulatory compliance increased from a substantial level to a full (100%) level. Over the past 50 years, this same result was found when these analyses were performed. See the following article published in the Journal of Regulatory Science for additional details: (***https://journals.tdl.org/regsci/index.php/regsci/article/view/108***).

Why is this important from a public policy perspective? It appears from these results that public policies which demand full (100%) regulatory compliance may not be in the best interest of providers nor clients being served. The Regulatory Compliance Theory of Diminishing Returns has implications for all of regulatory science and would apply to any field in which a closed system of standards/rules/regulations are utilized. Therefore, it is being suggested that the theory be applied to other economic systems involving banking, trade, markets, supply/demand chains, etc... that are heavily regulated. When a more open system of standards/rules/regulations are utilized, the diminishing returns effect is less evident because of the introduction of program quality elements into the equation (see RIKI Technical Research Notes on the balance of regulatory compliance and quality as well as regulatory compliance modeling which clearly demonstrates the differences between open and closed systems).

So what would this look like from a program monitoring perspective? Rather than requiring companies, organizations, or agencies to be in full regulatory compliance, it would focus more on substantial compliance with all standards/rules/regulations and full compliance with key indicator standards/rules/regulations that statistically predict overall regulatory full compliance. This would be a more effective and efficient allocation of monitoring resources that would lead to increased outcomes for clients and better management for providers.

The ultimate goal is to obtain the proper balance of regulatory oversight which is not too stringent nor too lax but rather one that focuses on the right (statistical predictors) standards/rules/regulations producing the greatest impact on clients and providers of service.

May

2022

Federal, National, and State Reports on Licensing and Differential Monitoring

Sunday 8 May, 2022

Attached are several examples of Federal, national, and state reports on state of the art licensing and differential monitoring initiatives. These reports have helped to shape the research efforts as we move forward with licensing and differential monitoring in early care and education.

Several Federal agencies are well represented, such as the Office of Child Care, the Administration for Children and Families, Health and Human Services, USDA, Assistant Secretary's Office for Planning and Evaluation, Office of Planning, Research, and Evaluation; National Organizations, such as the National Association for Regulatory Administration, National Women's Law Center, CLASP, BUILD, Child Care and Early Education Policy and Research Analysis, and Child Trends; and states, such as Ohio, Minnesota and Illinois.

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Instrument Based Program Monitoring

Tuesday 10 May, 2022

This is an article written back in 1985 that really tied licensing measurement together into a quantitative approach of instrument based program monitoring rather than case anecdotal records and proposed the use of key indicators/predictor rules, risk assessment/weighting of rules, and the introduction of differential monitoring which back then was called abbreviated inspections or inferential inspections.

The article appeared in *Child Care Quarterly* and really did begin to usher in a paradigm shift in licensing measurement and with the introduction of the Theory of Regulatory Compliance the movement from issuing full licenses with 100% regulatory compliance to substantial compliance with all regulations. This article also introduced the *Early Childhood Program Quality Improvement and Indicator Model* as a means for typing regulatory compliance together with quality initiatives, especially technical assistance, training, and professional development which will be addressed in future posts.

I am hoping to do this with several articles that I think are very pertinent to licensing measurement and post summaries of their particular significance for regulatory science and program monitoring. The hope would be that this new series will help to inform future licensing researchers and regulatory scientists regarding the nuances and idiosyncrasies of licensing measurement and regulatory compliance. As one will see, there are many measurement issues with licensing data and how best to analyze licensing data. This new series really started with the post before this one in which Federal, national, and state reports were listed and presented related to licensing and differential monitoring. The subsequent posts will provide a bit more detail of many topics presented in these various reports. These posts will also provide a backdrop to the National Association for Regulatory Administration's Licensing Measurement course which is part of their Licensing Curriculum.

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 lastly, 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, etc… Where ever 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 rules. It is never about more or less rules, it is about which ones 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.

Child Care QuarterlyDownload

Regulatory Compliance Diminishing Returns

Tuesday 10 May, 2022

This article published in the *Journal of Regulatory Science* in 2019 has helped to create an interesting heuristic problematic for the regulatory science field. The essence of the treatise is moving regulatory policy from full compliance with all rules to substantial compliance with all rules and full compliance with specific predictor rules. This is a dramatic departure from regulatory policy that has been promulgated within the regulatory field for the past 100 years.

Because of the regulatory compliance theory of diminishing returns, the following approaches and methodologies of differential monitoring, key indicators for licensing and quality, as well as risk assessment rules have been introduced to the regulatory science field. None of this could have occurred without the introduction of this theory. It has really altered how we approach regulatory compliance from a measurement and program monitoring perspective. The implications of this theory will be further explored in an upcoming post dealing with program monitoring paradigms and the relationship between regulatory compliance and program quality.

2019 Regulatory Compliance Theory of Diminishing ReturnsDownload

International Study of Child Care Regulations Comparing the USA with Several Other Countries

Tuesday 10 May, 2022

This article published in the *International Journal of Child Care and Educational Policy* in 2013 compared the regulatory compliance within the USA with approximately 20 other countries to determine the emphasis placed upon rules and regulations in the respective countries. It is clear from the results that the USA emphasized more structural aspects of rules and regulations dealing with health and safety while the other countries emphasized the professionalization of the teacher in the classroom.

This article also introduced to an international audience the *Early Childhood Program Quality Improvement and Indicator Model*, now in its 4th edition and its implications with the advent of Quality Rating and Improvement Systems on a large scale in the USA.

International Journal of Child Care and Education PolicyDownload

Solution to the Child Care Trilemma

Tuesday 10 May, 2022

This article appeared in the *Child Care Information Exchange* in the mid 1990s. In the early part of that decade, Gwen Morgan, one of the pioneers of early care and education (ECE) regulatory science and administration, proposed the child care trilemma. The child care trilemma consists of the delicate balancing act of affordability, accessibility and quality. Dr Morgan's thesis was that you could not change one without impacting the others and the child care field was having difficulty dealing with the trilemma at that point.

The article presents a proposed solution that alters the conventional wisdom of regulatory science and policy by suggesting to not increase adult child ratios but rather decrease it so that one additional child could be cared for by a very highly qualified teacher (BA/MA in ECE) and the additional revenue brought in by the additional child go directly to this highly qualified teacher as a teaching bonus/salary increase. By utilizing such a solution, it addresses all three components of the trilemma of quality, accessibility and affordability without violating any of them.

CCIE Trilemma Solution ArticleDownload

The Use of Contact Hours Rather than Group Size or Adult Child Ratios as a Licensing Metric for Regulatory Compliance

Tuesday 10 May, 2022

This article was published in 1980 in *NARA News* as a licensing measurement enhancement. It really grew out of the regulatory compliance need being addressed at the national level with the changes being made in the Federal Interagency Day Care Requirements (FIDCR). There was a concern by many Federal policy makers that the monitoring system was going to be too much of a burden on individual programs in

attempting to measure regulatory compliance with the revised FIDCR standards. Interesting this same concern would lead to the development and implementation of the Key Indicator methodology, but more about that in future posts.

For this post, we will just center in on the concerns about how best to measure regulatory compliance with two key rules of the FIDCR: adult child ratios and group size. To measure regulatory compliance with these two rules it was necessary in the past to take painstaking measurements of the number of children and adults at various times during the day in child care programs.

The below article describes a mathematical model "Contact Hours" that can be used as an off-site proxy to determine regulatory compliance without ever stepping foot in a program. There are actually two articles presented here: 1) The original article published in 1980; 2) A 2021 paper based upon the use of the mathematical model in the state of Washington. In this second paper, the Contact Hours mathematical model was enhanced and expanded to deal with potential infection rates in child care programs during the COVID-19 pandemic. State administrators saw it as a solution to determining regulatory compliance without having to make onsite observations which were very restricted during the COVID-19 pandemic in 2020-21. The Contact Hours mathematical model worked very nicely in Washington state determining regulatory compliance but it also helped to target mitigation efforts in programs that were having infection outbreaks based upon particular threshold levels.

NARA Original Contact Hour ArticleDownload
Contact Hour Metric PaperDownload

Improving Child Care Quality Through A Coaching Intervention

Tuesday 10 May, 2022

This article was published in 2002 in *Child and Youth Care Forum*. This article built off several studies in Pennsylvania which clearly demonstrated the lack of an effective professional development system, especially involving infant toddler caregivers. The mentoring/coaching intervention as designed and described in this article was revised and enhanced in several other studies to follow in order to address this major gap in the professional development system in Pennsylvania.

These other studies will be described in subsequent posts in which the coaching intervention was utilized by child care health consultants: ECELS-Early Childhood Education Linkage System, was used online: Better Kid Care, and was used as a micro-learning problem solving approach: iLookOut. This line of research helped to complete the *Early Childhood Program Quality Improvement and Indicator Model's* quality initiative sector by adding professional development to Quality Rating and Improvement Systems and Accreditation Systems.

CYFC Coaching ArticleDownload

Regulatory Science's Search for a Program Monitoring Paradigm and Some Key Relationships Between Compliance and Quality in Early Care and Education: A Policy Commentary

Wednesday 11 May, 2022

Here is a policy commentary manuscript that delineates the key elements or alternate program quality paradigms and their subsequent implications for regulatory compliance measurement and program quality that has been submitted to the *Journal of Regulatory Science*. This manuscript is intended for other licensing researchers and regulatory scientists as they deal with licensing measurement issues in regulatory science. Hopefully it provides some key parameters to consider as the regulatory science field matures into a full-blown science.

A brief comment about the *Journal of Regulatory Science*. This relatively new journal, started publishing in 2013, is an excellent forum for those researchers and scientists who are doing regulatory science related research. It is open sourced and encourages scientists from all content disciplines who have an interest in regulatory science to submit their research to the journal. I have been involved in research and publishing for 50 years and this journal and its approach is a breath of fresh air in their openness, attention to detail, and creating a peer review process that makes sense and is timely. I encourage any regulatory science researcher or scientist to check this journal out for sharing their research (***https://journals.tdl.org/regsci/index.php/regsci/about)***.

Journal of Regulatory Science FieneDownload

Regulatory Science, Differential Monitoring, and Licensing Measurement Technical Research Notes Anthology

Thursday 12 May, 2022

Attached please find an anthology that contains technical research notes from the past decade on regulatory science, differential monitoring and licensing measurement. I thought it would be helpful to regulatory scientists and licensing researchers to have all these various research notes in one location, so I created this anthology.

Technical Research Notes Anthology1Download

Licensing Measurement/ Regulatory Science Course Resources

Friday 13 May, 2022

Below are a series of resources for the licensing measurement/regulatory science course that are organized as anthologies and summarizing information from the RIKI Publications webpage.

1. Class Syllabus: Lists the 13 classes with a brief summary of what is to be covered in each.

2. Articles: the key articles that describe the theory, paradigm, and model.

3. Reports: A book of readings/reports highlighting the key elements in the methodology.

4. Papers: The Washington State blueprint for validation of their monitoring systems.

5. Webinars: The slide deck that describes the overall differential monitoring model.

6. Posters: Eight posters that summarize the model and its key components.

7. Research Notes: A decade of research notes enhancements to the model and system.

8. National/Federal Reports: Several of the key national publications on monitoring.

9. NARA Reports: Specific reports produced by NARA Consultants.

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RegalMetrics Introduction

Friday 20 May, 2022

I have discussed licensing measurement a great deal in this blog. Today, I want to introduce a new term to basically describe what I have been discussing with licensing measurement, called Regulatory Metrics or RegalMetrics for short. The reason for doing this is to be better positioned within the burgeoning new science called Regulatory Science. Licensing may be too delimited in its scope while regulatory science is more all encompassing and I feel will be the new science of rules, regulations, and standards.

The same issues are still present within regulatory metrics as they were in licensing measurement, such as how regulatory compliance data distributions are dramatically skewed with intense kurtosis. How best to deal with nominal measurement data? Do we transform the nominal data to ordinal scales as has been proposed in this blog (January 9th Post) into a *Regulatory Compliance Scale* to make it more similar to other more normally distributed program quality data distributions? Another way of thinking about this is in having "Licensing Buckets" for "Full, Substantial, Mid, and Low" regulatory compliance levels (see the Post of January 9th). The need for dichotomization of data is warranted because of the skewed data distributions. How best to minimize false positives and false negative decisions regarding the issuing of licenses based upon regulatory compliance scores. And lastly and probably most significant is how to deal with the introduction of mediocrity into fully compliant programs.

This last issue is a major issue for regulatory science regardless of discipline in how best to address the plateau of quality as programs move from substantial to full regulatory compliance. By not addressing this issue will continue to lead to frustration by consumers and the various industries we regulate in not being able to fully reward our outstanding performers because based upon regulatory compliance scores it is difficult to distinguish between these top performers and the mediocre performers. Regulatory science modeling is excellent at distinguishing between fully compliant programs and those that are having real difficulty with regulatory compliance. Where the models break down is distinguishing between programs that are in substantial compliance and full compliance when it comes to any quality dimension. This is what leads to the public wanting deregu-

lation because the rules just don't seem to make a difference. And then when there is a tragedy, the push for more regulations in order to protect all individuals so that they do not have the same tragedy repeat itself. It is this constant deregulation versus over-regulation mentality that is so counter productive and not driven by good public policy nor empirical data.

Key Indicators and Risk Assessment Applied to the Ten Commandments

Friday 20 May, 2022

I get asked all the time about what is the difference between the Key Indicator and the Risk Assessment methodologies. Generally I reply with a very academic type of response either explaining the difference given the research literature or the statistical methodologies employed. It hasn't worked very well and there still is confusion in the field about the differences between what is a key indicator rule and what is a risk assessment rule. So I am going to take a different tack and let's apply it to one of the most important sets of rules that has ever existed and see if it helps: The Ten Commandments.

Let's start with the risk assessment methodology and attempt to ascertain which of the Ten Commandments would be a risk assessment rule. What immediately jumps out to me is "Thou Shall Not Kill". This commandment would definitely fall under the "do no harm" rule of risk assessment in attempting to avoid morbidity and mortality concerns. If I were to send this out to a group of Biblical scholars and ask them for their expert opinion, I am guessing that this would be on the top of their list as well. So I feel pretty confident that we could say that "Thou Shall Not Kill" would meet the criterion of being a Risk Assessment Commandment.

Now, let's turn our attention to the key indicator methodology and attempt to ascertain which of the Ten Commandments would be a key indicator rule. This gets a bit tricky because key indicator rules usually don't place individuals at severe morbidity or mortality. But the key indicator rules statistically predictor overall rule compliance. So knowing this one Commandment would help us to know who is most likely to abide by all the other Commandments. That is kind of important from a societal point of view because we would like to have a lot of these people as neighbors; it would be like living in Mr Rogers' Neighborhood. So what do we think could be a good Key Indicator Commandment? Based upon my 50 years of research in producing key indicator rules I would say that "Thou Shall Not Steal" might be a good candidate. I am guessing that there is a deep structure here where a person who is honest is most likely to abide by all Ten Commandments, so it would be an excellent Key Indicator Predictor Commandment. Of course to be certain, we would have to empirically test this hypothesis out which is the cornerstone of the key indicator rule methodology: data utilization.

I hope I have enlightened those of you who may have been somewhat uncertain about the differences between risk assessment rules and key indicator rules. Hopefully this foray into the Biblical literature via the Ten Commandments has helped to make the distinction more clear.

Comparing the CLASS and ERS Program Quality Scales

Saturday 21 May, 2022

Two of the most widely used early care and education program quality tools used in the field are the CLASS: Classroom Assessment Scoring System and ERS: Environmental Rating Scales. Is there an advantage to using one versus the other. In the state of Washington as part of their QRIS: Quality Rating and Improvement System they happen to utilize both. In a study validating their Licensing Decision Making System, I had the opportunity to see them used side by side and wanted to report the results here. In other separate studies conducted in Head Start, Georgia, and Pennsylvania I saw similar results but wanted to wait to have the CLASS and ERS side by side in a specific study.

Here is what I found in making that comparison. In comparing the CLASS head to head with the ERS the correlation between the two scales was r = .24; p < .0001; n = 385. So both scales had a statistically significant correlation which one would expect since they are both measuring classroom quality, albeit from different perspectives.

Where it becomes interesting is when one begins to compare the two with the Washington state QRIS correlations. The CLASS and QRIS is r = .12; p < .022; n = 385 while the ERS and QRIS is r = .39; p < .0001; n = 385. It appears that the ERS is more sensitive at discriminating differences in QRIS than the CLASS. I further tested this my running one-way ANOVAs: CLASS x QRIS: F = 10.71; p < .0001; n = 385 while the ERS x QRIS: F = 26.534; p < .0001; n = 385. Both are statistically significant but the ERS again shows a much larger F ratio than is the case with the CLASS. To delve more deeply into these differences required looking at some basic descriptive statistics, such as the mean, standard deviation, skewness, and kurtosis. The following chart shows the results.

CLASS/CO	
ERS	
Mean	
6.14	
4.12	
Standard Deviation	
0.75	
0.65	
Skewness	
-4.51	
0.12	
Kurtosis	
33.02	
-0.39	

Comparison of CLASS and ERS Descriptive Statistics

As one can see from the descriptive statistics there are some major differences between the CLASS and the ERS in how the data distributions play out. The ERS clearly has more variance in their data distribution than the CLASS does. These results are consistent with other studies in analyzing the respective data distributions. I feel that these results are significant for other early care and education researchers, developmental psychologists, and regulatory scientists as they conduct similar studies utilizing these respective tools.

Regulatory Science Metrics Matrix

Sunday 22 May, 2022

The 2 x 2 matrix format has been used in many different contexts when it comes to decision making. I have found the 2 x 2 matrix very useful in regulatory science especially when it comes to

measuring regulatory compliance with rules. In this post, I would like to delineate how the 2 x 2 matrix can be used with nominal measurement of regulatory compliance where it is the essence of regulatory science metrics.

Reality
Compliance (+)
Non-Compliance (-)
Measurement
Compliance (+)
(++) Expected
False Negative (-/+)
Non-Compliance (-)
False Positive (+/-)
(–) Expected

Regulatory Science Metrics Matrix

In the 2 x 2 matrix above, the *Regulatory Science Metrics Matrix*, we are attempting to measure regulatory compliance comparing the measurement by an inspector with what exists in reality. The (+) = a positive response (there is compliance) and a (-) = a negative response (there is non-compliance). The (++) = compliance was recorded/measured and in reality there really was compliance. This is expected and desirable since we want everyone to comply with the respective rules we are measuring. The (–) = there was non-compliance recorded/measured and in reality there really was non-compliance. This is expected but not desirable; obviously we don't want to find any non-compliance although it is good that the inspector is reliably accurate. The False Positive (+/-) = there was non-compliance recorded/measured but in reality there was compliance. The False Negative (-/+) = compliance was recorded/measured but in reality there was non-compliance.

From a regulatory science point of view and the measurement of regulatory compliance, the (++) and (–) are the two results we want to see; they are expected and desirable. We never want to see a False Negative (-/+), and we would like to minimize False Positives (+/-) whenever possible. In the actual regulatory science world, false positives and negatives do occur and are part of regulatory science. The goal is to minimize them as much as possible. This above *Regulatory Science Metrics Matrix* has become a useful tool in measuring regulatory compliance and in validation studies related to regulatory science in the human services.

Comparison of Online Mandated Reporter Trainings

Sunday 22 May, 2022

Here is a recently published article on comparing online mandated reporter trainings which highlights the iLookOut Child Abuse Prevention Training program. Very interesting state by state comparisons.

APSAC ArticleDownload

Regulatory Compliance Validation Studies

Sunday 22 May, 2022

Here are five studies that demonstrate validation of the Licensing Key Indicator (LKI), Risk Assessment Methodology (RAM), and Regulatory Compliance Theory (RCT). The studies were done in the states of Georgia (RAM, RCT), Washington (RAM, RCT) national with Head Start (RCT), and internationally in the Provinces of Ontario (LKI) and Saskatchewan (LKI, RAM).

Georgia Core Rule Validation + TRCDownload
Washington RAM Validation + TRCDownload
Head Start TRCDownload
Ontario Tier Licensing ValidationDownload

Saskatchewan KIS + RAM ValidationsDownload

Regulatory Compliance Data Analysis Plan Example taken from Risk Assessment Indicators

Friday 27 May, 2022

Below is a brief technical research note providing an example of a data analysis plan utilizing risk assessment indicators. It provides a means for thinking about how best to implement such a plan from initial design to validation of the plan.

–Risk Assessment Indicator Data Analysis Plan Notes.docxDownload

Regulatory Science Paradigm Examples

Friday 27 May, 2022

Below is a policy commentary article just published in the *Journal of Regulatory Science, Volume 10, Issue 1* on regulatory science monitoring paradigms and the relationship between regulatory compliance and program quality. Eighteen key elements are introduced in a series of dichotomies which help to lay out a blueprint and the parameters when thinking about program monitoring and the continuum between regulatory compliance and program quality.

Journal of Regulatory Science FieneDownload

Using SAS to Generate Key Indicators

Tuesday 31 May, 2022

Here is an analysis performed by statisticians from the Province of British Columbia, Fraser Health, Population Health Observatory utilizing SAS rather than SPSS which is the best example of this approach. In this technical research note it outlines very nicely the approach taken that can be utilized by other regulatory scientists and licensing researchers. I highly recommend the statistical approach.

BCKIMDownload

National and State/ Provincial Presentations Involving Differential Monitoring and Key Indicators

Tuesday 31 May, 2022

Below are several national and state/provincial (Massachusetts, Minnesota, Alberta) presentations involving differential monitoring and key indicators.

Future of Monitoring PresentationDownload
Massachusetts PresentationDownload
Minnesota PresentationDownload
Alberta PresentationsDownload

June
2022

Regulatory Compliance Validation Study Data Bases

Saturday 4 June, 2022

Last month several regulatory compliance validation studies were posted (May 22nd). For regulatory science and licensing researchers who are interested, the SPSS databases are available through Mendeley Data (**Fiene, Dr Richard (2022), *"Regulatory Compliance Theory of Diminishing Returns"*, Mendeley Data, V1, doi: 10.17632/cchm8w64xd.1**) or by contacting Dr Fiene directly and requesting the respective SPSS database.

Provision of Technical Assistance to States: Better Care for the Babies Project.

Saturday 11 June, 2022

This is an older report but I thought it was still relevant today, so I wanted to post it for other ECE researchers and regulatory scientists to review and use.

The Better Care for the Babies (BCTB) Project was initiated in April 1989 to help states improve the quality of infant and toddler child care, especially for low-income children whose parents are in the labor force and/or making the transition from welfare to work. The BCTB Project initiated ongoing, negotiated, goal-directed technical assistance with three state interagency teams in Florida, Illinois, and Utah; conducted a national technical assistance forum; and implemented national outreach through the preparation and dissemination of policy papers. The chapters of this case study describe the background and design of the project, the policy context and assumptions, the technical assistance approach and implementation, project actions and policy improvements related to child care quality made by the BCTB states, the project as perceived by key participating state administrators themselves, lessons learned, and recommendations. The recommendations focus on federal mandates that would include incentives, offering states goal-directed technical assistance, coordination of state policies and programs, and conveyance of information to state leaders concerning the influence of child care on child development.

Lessons_Learned_Provision_of_Technical_A

Using Research to Improve Child Care

Tuesday 14 June, 2022

The attached report is as relevant today as it was 25 years ago; it is a synthesis of major issues, policy questions, available research findings and information needs in child care policy, presented in a form that can provide a framework for ongoing dialogue and action by the research community in partnership with state child care administrators and other key stakeholders.

This report builds upon work at the Child Care Policy Research Symposium, sponsored by theChild Care Bureau, Administration for Children and Families, US Department of Health and Human Services. The Symposium brought together researchers, child care policymakers and state and federal staff for a unique opportunity to discuss current research efforts and the research needs of state child care administrators.

Using_Research_To_Improve_Child_Care_forDownload

Licensing Measurement & Program Monitoring Systems eHandBook

Saturday 18 June, 2022

Below is a *Licensing Measurement & Program Monitoring Systems eHandBook* to accompany the *NARA Licensing Measurement and Systems course*. It is recommended to be read along with taking the *NARA course* but it can be read as a stand alone book. It is a short guide to licensing measurement introducing some of the key issues and tenets related to applying regulatory science to human service regulatory administration. It is meant to be read in one sitting but hopefully it will generate a lifetime of questions related to the field of regulatory science.

LMS eHandBook RFiene 2ndc EdDownload

NRCEC: National Research Conference on Early Childhood Virtual Venue

Wednesday 22 June, 2022

Below is the National Research Conference on Early Childhood Program Book which gives the details of the 2022 conference with all presenters and their sessions. The conference will be held June 27-29, 2022. NRCEC presents the latest research on early childhood programs and the young children and families they serve. The virtual venue will host plenaries, breakout sessions, poster sessions, networking discussions, and more. NRCEC promotes conversations between early childhood researchers, practitioners and policy-makers.

NRCEC-2022-Program-BookDownload

Research and Practice: Health and Safety of Child Care Centers

Wednesday 22 June, 2022

Health_and_Safety_of_Child_Care_CentersDownload

The LMS eBook

Thursday 23 June, 2022

Below is the ***LMS eBook*** containing the original handbook, the webinar slides with notes, the NARA reports, and the technical research notes all together in one volume rather than having them in different posts and in different sections of the website.

-LMS eBook ALLDownload

National Research Conference on Early Childhood Poster Presentation

Thursday 23 June, 2022

Here is the link to a poster presentation with Dr Sonya Stevens, Daniel Blevins, and Amber Salzer entitled: ***Identifying Predictive Indicators: The State of Washington Foster Care Home Study.*** The poster presentation was at the National Research Conference on Early Childhood, June 27th – 29th.

https://nrcec2022.ipostersessions.com/Default.aspx?s=69-71-06-39-C6-15-22-0F-7F-C8-75-4F-A1-8E-52-7D

July
2022

Rwanda Study Utilizing the Theory of Regulatory Compliance

Monday 4 July, 2022

The study examined the relationship between procurement process compliance and procurementperformance of public procuring entities in Rwanda. The objective of the study was to assess the effects of procurement planning on procurement performance; to assess the effects of procurement sourcing andcontract management on procurement performance and to assess the effects of procurement transparency on procurement performance of public procuring entities in Rwanda.

A descriptive survey research design was adopted using quantitative methods and used closed endedquestionnaire as a data collection instrument. The study targeted 94 respondents from five districts located in the northern province of Rwanda. Purposive and stratified sampling techniques were used to select respondents. Data was then analyzed on quantitative basis using Pearson's correlation, multiple linear regression analysis and descriptive statistics.

The regression model used was LogY= βo + β1LogXit1 + β2LogXiit2 + β3LogXiiit3 + ε t and multiple R (correlation) value obtained was 0.995 (99.5%). The model summary depicted from the regression analysis with multiple R (correlation) value of 0.995 (99.5%) indicated a highly positive relationship between the dependent and independent variables and, the overall contribution of the independent variables: procurement plan (P1), Procurement process (P2), and procurement transparency (or P3) to the procurement performance (or P4) which accounted for 99.04% (R2 = 0.9904) of the variation in the procurement performance.

The research concluded that procurement planning, procurement process compliance and procurement ethics in public procurement had a great significance on procurement performance which led to confirm the relationship between capacity building in procurement and regulatory compliance of governmentProcurement entities in Rwanda. As a recommendation, procuring entities should continue to focus more on ensuring compliance to procurement regulations in public procurement to ensure a sustainable procurement performance.

TRC in RwandaDownload

Two Additional Studies Utilizing the Theory of Regulatory Compliance

Monday 4 July, 2022

Here are two additional studies utilizing the theory of regulatory compliance from Kenya published in *International Journal of Human Capital in Urban Management* and the *Journal of Contemporary Urban Affairs* by Dr Wilfred Ochieng Omollo.

ijhcum-volume-5-issue-1-pages-1-18-2020Download
juca-volume-4-number-2-pages-95-108-2020Download

Theses Utilizing the Theory of Regulatory Compliance

Monday 4 July, 2022

Improving medical records documentation among the health workers remains amajor challenge to achieving compliance to medical records documentation SOP inmany developing countries. Compliance to medical records documentation SOP canbe used to improve health care and protect people against catastrophic health carerisks and expenses. Most developing countries have low compliance to medicalrecords documentation SOP and rely on manual systems for documentation. Despitehaving automated systems in some private and public health facilities, compliance tomedical records documentation is still below the acceptable standards. The mainobjective of this study was to establish compliance with medical recordsdocumentation SOP among health workers in Bungoma level 4 hospital, Kenya,with specific objective of determining association between sociodemographiccharacteristics and compliance with medical records documentation SOP, influenceof institutional characteristics and, influence of health workers' IT Proficiencyon compliance with medical records documentation SOP among health workers inBungoma level 4 hospital. The current study adopted an analytical cross-sectionaldesign and quantitative data was collected using self-administered questionnaires,stratified proportionate and simple random sampling techniques were both employedto select 197 health workers sampled from a target population of 400 in Bungomalevel 4 hospital. Chi-square, fishers exact, and Binary logistic regression analyseswere used to test the association and the relationships between dependent(compliance with medical records documentation SOP) and independent variables(sociodemographic, institutional, and IT proficiency) respectively, albeit at a 95%confidence interval (CI), frequency tables, pie charts, and bar graphs were used tosummarize and present the results. The current analysis confirmed that thecompliance level to medical records documentation SOP was indeed very low at47.2%. Socio-demographic factors such as Cadre (Fisher ‟s exact test =24.52;p=0.002), level of education (Fisher ‟s exact test =11.26; p=0.042), and workexperience χ2 (8.75, df=5, N =195) p=0.047 were significantly associated withcompliance to medical records documentation SOP. On both Institutionalcharacteristics (P=0.023, exp(B)=1.454) and healthcare worker ‟s InformationTechnology proficiency (P=0.027, exp(B)=2.156), positively influenced complianceto medical records documentation SOP. The current study concludes that, cadre,level of education, and work experience were significantly associated withcompliance to medical records documentation SOP, Institutional characteristics liketechnical support, requisite documents, staff training and, health worker ‟sinformation technology proficiency, positively influenced compliance to medicalrecords documentation SOP respectively. The study therefore, recommends anurgent need for the County Government to channel additional funding towardsemploying more technical staff, procuring the requisite documentation tools, andtraining of staff on the documentation tools. Otherwise, the facility healthmanagement team needs to factor in periodic Information Technology refreshertraining for health workers, since the majority of health workers in Bungoma level 4facility seem to have at least an intermediate level of IT proficiency. Future researchshould incorporate more robust data collection methods like observation checklists,and also consider qualitative methods like Key Informant Interviews to establishbetter insight on the compliance with medical records documentation SOP across alllevel 4 health facil-

ities in Bungoma County and beyond.

Compliance with the Medical ....Download
Another Thesis:

Orimba_An Assessment of the Kenya Quarry Sustainability Performance in Nairobi City CountyDownload
Maina, Esther Wambui MIST 2022Download

Kenya's Use of the Regulatory Compliance Theory of Diminishing Returns

Tuesday 5 July, 2022

I have posted several blog-feeds previously on how Kenya has been very creatively utilizing the regulatory compliance theory of diminishing returns in several industries when it comes to regulatory development and analyses. It has become evident in theses being produced at the university level as well as faculty research being published. This is an excellent example of a developing country taking an out-of-the-box approach to regulatory analysis which should yield both effective and efficient results for their country. Rather than getting into the argument as many highly industrialized countries have done about either more or less regulations, Kenya has embraced the new theory (Fiene, 2016, 2019, 2022) in the search for the productive regulations that produce the greatest output/outcome. I would hope that other countries would follow Kenya's example as they develop and revise their rules and regulations.

Fiene, Richard, Theory of Regulatory Compliance (October 1, 2016). Available at *SSRN*: https://ssrn.com/abstract=3239691 or http://dx.doi.org/10.2139/ssrn.3239691

Fiene, R. (2019). A treatise on Regulatory Compliance. *Journal of Regulatory Science*, Volume 7, 2019. https://doi.org/10.21423/jrs-v07fiene

Regulatory Compliance Monitoring Paradigms and the Relationship of Regulatory Compliance/ Licensing with Program Quality: A Policy Commentary, *Journal of Regulatory Science*, Volume 10, 2022. https://doi.org/10.21423/jrs-v10i1fiene

Three Theories of Regulatory Compliance

Tuesday 5 July, 2022

There are three theories of regulatory compliance that I would like to introduce and probably will spend some time describing in future blog posts but for the time being let me just introduce them.

The three theories of regulatory compliance are the following: Responsive regulation (Ayers & Braithwaite, 1992); Socio-economic (Sutinen & Kuperan, 1999); and Diminishing returns (Fiene, 2019). These three theories help to provide the basic parameters of regulatory compliance within regulatory science. Each deals with a specific parameter of regulatory compliance when it comes to approaches, measurement, and analyses. A great deal has been written about each of these theories by viewing the many search engines available to regulatory scientists and licensing researchers.

For the interested regulatory scientist and/or licensing researcher, I would suggest beginning with the three publications below as a starting point:

Ayers, I. & Braithwaite, J. (1992). *Responsive Regulation: Transcending the Deregulation Debate*. New York: Oxford University Press.

Sutinen, J.G. and Kuperan, K. (1999) A Socio-Economic Theory of Regulatory Compliance. *International Journal of Social Economics*, 26, 174-193.

Fiene, R. (2019). A treatise on Regulatory Compliance. *Journal of Regulatory Science*, Volume 7, 2019. https://doi.org/10.21423/jrs-v07fiene

Key Indicators and Risk Assessment Rule Metrics Revisited (RIKINotes BlogPost #172)

Thursday 7 July, 2022

I have posted on licensing metrics in this blog several times and wanted to provide an update to the latest thinking related to the relationship between these two methodologies based upon a hypothetical risk assessment scale. This is provided for those licensing researchers and regulatory scientists who are interested in the measurement dynamics of licensing/regulatory data. These concepts are pertinent to regulatory science in general and are not specific to any content area. A graphic display of this relationship is provided in the attached document with a brief explanation of how key indicator rules and risk assessment rules are related.

As I have said in previous blogs and publications, risk assessment rules are to mitigate the relative risk to clients while key indicator rules are predictor rules and predict overall regulatory compliance with all rules. Risk assessment rules are the "Do No Harm" rules while key indicator rules are more like the "Do Good" rules.

The important factor in any differential monitoring system is finding the right balance of risk assessment and key indicator rules. We always want the approach to be cost effective and efficient at the same time. Again effectiveness is more pertinent to the risk assessment rules while efficiency is more pertinent to the key indicator rules. This is easier said than done.

KIS RAM Graphic NotesDownload

Organization of the NARA and RIKI Websites: What is Available and Where!

Thursday 7 July, 2022

For those of you who are interested in the NARA Licensing Measurement Course I wanted to provide a location map on where you can find all the resources for the course because they have grown a great deal over the years.

On the NARA website you will find the following (https://www.naralicensing.org/key-indicators):

Brochure describing the various methodologies

eHandBook

Technical Research Notes

All the NARA Related Reports

Regulatory Compliance/Science Theoretical Papers

Powerpoint/Webinar Slides with Notes

On the RIKI Website you will find the following (https://rikinstitute.com/):

Introduction

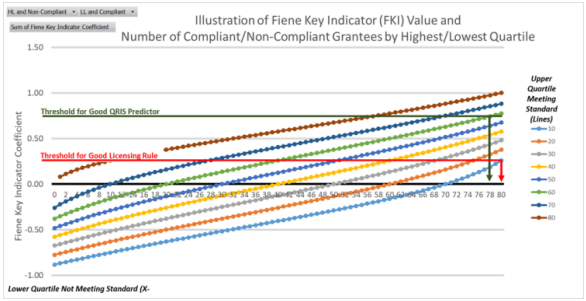
RIKI Notes Blog Posts

All the Publications and documents related to Licensing Measurement

Fiene Key Indicator Coefficients

Thursday 14 July, 2022

Below is a graphic that depicts the key thresholds for the use of the Fiene Key Indicator Coefficients in a differential monitoring approach. The graphic provides an illustration of the Fiene Key Indicator (FKI) values and the number of compliant/non-compliant programs by highest and lowest quartiles. It also provides the thresholds for a good licensing rule and a good QRIS: Quality Rating and Improvement System predictor. Licensing researchers and regulatory scientists can use this graphic in making a pass/fail decision tree with their particular rules/regulations/standards determination in constructing a Key Indicator Instrument.



August
2022

Random Thoughts About Life, Especially As We Age

Monday 8 August, 2022

Sometimes we have a tendency to push the envelope too far and the contents of the envelope gets lost in the process.

You can tell that there is high inflation because the "money stealer wildflowers" are really bad this year.

Seniors always have something new to talk about because they can't remember what they talked about the day before.

For seniors every day is a new day because they can't remember what happened yesterday.

The beginning of life our birthdays are important because we haven't had many, and at the end of our life they are equally important because we realize we don't have many left.

Time becomes precious as we age because we begin to realize we don't have much left.

Doing nothing about anything is the epitome of laziness.

Later is better than sooner is the essence of procrastination.

By thinking we are creating each other.

Object permanence is the basis of all existence. Person permanence is the basis of all relationships.

Today is yesterday's future.

When the mental meets the physical, one has a singularity; or, Yin + Yang = Singularity.

I always thought that "kicking the can down the road" was not a good thing, until my wife got cancer and her treatments have given us the opportunity to "kick the can down the road" when it comes to longevity.

Forgetting something isn't a big deal, it is not realizing that you forgot something, That is a big deal.

Living in the present means forgetting about yesterday and tomorrow.

Cars traveling at 60 miles per hour at each other doesn't make sense; our roads were constructed when buggies went 5 miles per hour.

Rifles were needed back in the 1700s and the second amendment made sense, but assault rifles are not needed for peace or hunting. They are for war and killing the enemy. Second amendment is an 18th century law and doesn't pertain to the 21st century.

Getting from here to there isn't a big deal in quantum mechanics because you're in both places at the same time.

In quantum mechanics, entanglement is looking in the mirror and seeing someone else.

As children we build plastic models, as adults we build logic models.

The most expensive things in life are not really better, we just think they are.

Supply and demand is a group thought process.

Once a decision is made, non-linear reality becomes linear.

Timing is everything in life, from finding the love of your life, to finding a parking spot close to where you need to be.

A line is just a group of connected dots all going in the same direction.

Multiple universes can exist but we can only observe one.

The beginning of life and the end of life are matching bookends to each of our stories. The richness of our life is how many chapters and books we create between the beginning and end.

Senior vision is like star wars on a Monet canvas with the floaters and our less than optimal vision.

Sometimes the line between what is and what could be gets blurred.

We should always think we are better than we are, and sometimes we really are.

A mistress can be a woman/man or an avocation; love knows no boundaries.

Genius is seeing what has always been there but others have missed.

Einstein was only partly right about "God not playing dice with the universe"; God does if you accept quantum mechanics.

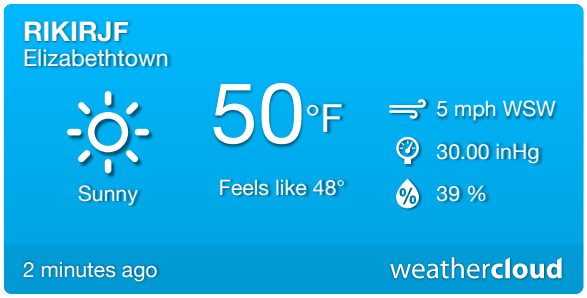
An Excursion into Meteorology

Monday 8 August, 2022

I have always had a keen interest in meteorology but never had the time to really get into it because of my research work as a research psychologist and regulatory scientist. But now in retirement from Penn State and RIKI I do have the time to really begin to make a full excursion into it. So this blog post will be very different than all the previous 175 blog posts and I will introduce this new journey.

As many of you probably know, I am a real data geek. I have been since grad school when you begin to make the decision to go clinical or research in psychology. I have always loved numbers and working with data sets. So for me it was an easy choice. Recently, I had found that I wasn't getting my data fix and being a data addict, I started to think more about meteorology and all the data that are present when you look at radar and weather charts. So I took the plunge and got my personal weather station (PWS). It is an Ambient Weather WS-2902-C WiFi OSPREY Solar Powered.

Here is a posting of my RIKIRJF Weather Station:



As you can see from the weather station name I have stuck with the RIKI label. Here are some other URLs that will take you to other weather related sites that you might be more familiar with:

https://www.wunderground.com/dashboard/pws/KPAELIZA118

https://www.pwsweather.com/station/pws/rikirjf

https://www.findu.com/cgi-bin/wxpage.cgi?call=GW2138

https://www.weather.gov/wrh/time-series?site=G2138

I have fully engaged in my excursion in setting up my PWS, but also I am pursuing getting registered and certified as a **mPing SkyWarn Spotter** so that I can send actual observations of storm conditions in addition to the data that gets sent to the NWS: National Weather Service via their CWOP program from my PWS (GW2138; G2138).

I have also become a member and an associate with the Royal Meteorological Society and the American Meteorological Society to learn more of the science and to further my education and take courses.

https://www.rmets.org/ **Royal Meteorological Society**

https://www.ametsoc.org/index.cfm/ams/ **American Meteorological Society**

I have been so welcomed by the memberships of both societies and they have been so willing to share their knowledge with an amateur meteorologist. It has been a great deal of fun and very intellectually stimulating. It is not everyday when you can correspond with meteorologists from NOAA and NASA. I plan in future blog posts to share some of these conversations; but also check out my Facebook and Twitter sites where I will be posting as well.

Rick Fiene, RMetS Member: 59934; CWOFID: GW2138; MADISID: G2138. You can contact me at *rfiene@rikinstitute.com* (Email for RJFRIKI) or *riki.institute@gmail.com* (Institute email for RIKI-AWS/RIKIRJF).

Meteorological Correlation Coefficient and the Tornadic Debris Signature (TDS) Metrics

Monday 8 August, 2022

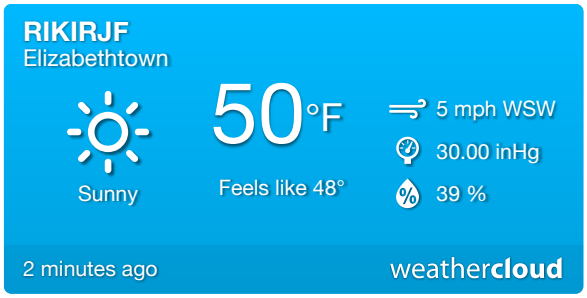
As I promised in my earlier post, I said I would highlight some of my discussions and my research journey into meteorology. So here is the first such post dealing with a couple of very interesting discussions I have been having with meteorologists.

Here are some of my impressions I have drawn from these wonderful discussions:

I wanted to follow up with a response based upon my earlier questions regarding the correlation coefficient and just some impressions from a non-meteorologist but someone really interested in data in whatever form it takes. The first impression has to do with the term correlation coefficient which for the non-meteorologist is slightly confusing, especially if you are coming from the social sciences. When I look at the intent and purpose of the correlation coefficient, a term like "debris coefficient" seems more appropriate. It doesn't change the interpretation, I think it just better describes its intent. I found it especially confusing when I was reading about the correlation coefficient being correlated with some other metric or variable.

The second impression was in viewing radar scopes and their interpretation. I found that very fascinating and I think the raw data behind the radar scope displays would be even more interesting to analyze. It would be interesting to see if there are any thresholds or tipping points right before the TDS – Tornadic Debris Signature begins to establish itself. I have found in many assorted data distributions that there are trigger points, thresholds, or tipping points which have a profound impact on subsequent data. For example, are there statistical predictors in earlier data that predict the formation of the tornado. If it has not been done already, this could be an interesting analytical framework.

Another impression I had is the wealth of resources available, especially the number of online courses made available through NOAA/NWS. I would highly recommend to anyone interested in meteorology to consult the following site (https://www.meted.ucar.edu/index.php), you will not be disappointed in seeing what is at your fingertips.



RMetS Member: 59934RIKIRJF/RIKIAWSC-WOF ID: GW2138MADIS ID: G2138WU: KPAELIZA118

Royal Meteorological Society and the SkyWarn Spotter Certificates

Friday 12 August, 2022

I became a member of the Royal Meteorological Society recently and a SkyWarn Spotter by completing the NWS/NOAA Basic SkyWarn training.

-Spotter CertificateDownload

Meteorological Decision Matrix

Sunday 14 August, 2022

Here is a proposed Meteorological Decision Matrix that I thought would be helpful in looking at historical TDS: Tornadic Debris Signature data or any severe storm data in general. This 2 x 2 Matrix is a common tool used within the social sciences and in other fields. I thought it might have some applicability in the field of meteorology as well.

wp-1660487312321Download

RIKI as a NOAA Weather-Ready Nation Ambassador

Monday 22 August, 2022

A new designation for RIKI today, we are honored to be part of the Initiative:

Welcome to the NOAA Weather-Ready Nation Ambassador ™ initiative. Your organization has been accepted as a NOAA Weather-Ready Nation Ambassador. **http://www.weather.gov/wrn/**

The Weather-Ready Nation Ambassador initiative is an effort to formally recognize NOAA partners who are improving the nation's readiness against extreme weather, water, and climate events. As a Weather-Ready Nation Ambassador, your organization is committing to work with NOAA and other Ambassadors to strengthen national resilience against extreme weather.

A Few More Thoughts I Want to Work On

Monday 29 August, 2022

I have been thinking a great deal lately about my new excursion into meteorology (RIKINotes Blog Post: August 8, 2022) and my other interests in the intersection between economics and psychology and lastly my theory of space which I have shared in previous blog posts (RIKINotes Blog Post: March 20, 2020). These are definitely thoughts I want to pursue because they are of interest and not fully developed by any means.

Meteorology/Weather:

I have continued my readings in meteorology and something really struck me the other day when I read about weather being caused by the uneven heating of the earth by the sun. So to me this means that we are going to be seeing more extremes from climate change where the earth will heat more severely. This recent summer has demonstrated some really extreme weather where places go without precipitation for months and then get 6 months worth of rain in 24 hours. I remember in my early life where the extremes were not as great and the highs and lows were not that different. Anyway, not like they are today.

Another anecdotal observation I have made as I do more reading is how air and water follow similar paths. For example, air has its birds; water has its fish; air has its jet stream; water has its gulf stream; etc.... I had never thought about air and water in that way. I will need to do more reading in this area to see what other similarities exist.

Economics/Psychology:

Supply and demand work in a linear way when there are no major events to change this relationship but let's say a pandemic occurs and people begin to make decisions based upon health rather than economics and suddenly *Maslow's Theory of Hierarchical Needs* comes into play and we have more of a nonlinear relationship between supply and demand. Is that what we are experiencing now with the aftermath of the COVID19 pandemic?

Theory of Space:

So this is an area that I have thought about a great deal, done a good deal of reading about, especially the work and theory of Jean Piaget in how children develop the notions of time and space (again see my RIKINotes Blog Post of March 20, 2020), but I have always been interested in extending it to physics in a more general fashion (RIKINotes Blog Post of 3/20/20). For example, are the four states of space: stationary space, moving space, empty space and filled space equated to the four major forces in physics: gravity, electromagnetism, weak nuclear force, and the strong nuclear force. Is it possible that all we really need is a theory of space to explain everything. Science loves parsimonios explanations.

I know, this is alot to ask, but stay with me for a minute and let me develop it a bit further conceptually. Let's start with some equivalencies:

Empty space = expanding universe.Filled space = mass, matter.Stationary space = black hole.Moving space = time.

Filled space x Empty space = gravity. Gravity is the interaction of filled space (mass/matter) with empty space.

Filled space moving at the speed of light = energy.

Expanding on the above:

Both filled space and empty space move. If they are not moving, then they are a black hole where space is stationary but infinite, and time doesn't exist. Black holes are the anchors to the universe, black holes keep the universe from expanding uncontrollably. The universe expands horizontally while black holes are infinitely stationary vertically.

The universe is in constant movement via expansion/contraction, so time is always present because empty space is moving. Filled space is moving and potential energy is always present when mass accelerates to the speed of light as well as gravity which is the interaction of filled space and empty space.

Space can be visible (as defined as 4 states above) or not visible (dark matter and energy).

Quantum mechanics dealing with stationary space; relativity dealing with space in motion.

Extrapolating from the above and establishing equivalencies with the four forces of physics:

Four Forces = Four States of Space:

. Gravity = Filled x Empty space interaction.

. Electromagnetic = Filled space moving speed of light.

. Weak Nuclear = Stationary empty space.

. Strong Nuclear = Stationary filled space.

Non-Linear/Non-Random Universe

Another thought or stream of consciousness I have had has to do with the difference between linear and non-linear reality. It is interesting to note that the most viewed RIKINotes Blog Post (April 9, 2018) deals with this conjecture. So I thought I would update some of my thinking about it.

I think there is a real deep structure regarding it and I would like for us to think about a circle and using that as a model to depict this relationship of linear and non-linear. A circle is really made up of an infinite number of points that fit within its boundaries. The point that is of most significance is the center of the circle where the radius originates and the diameter goes through it. Other than the center point all the other points are not all that significant and are basically random by nature. You can pick one or the other, it doesn't really matter.

But once you do pick a point and then pick another you have a linear, non-random relationship between the two. The radius, diameter and the circumference possess this quality, they are all non-random. Now in the case of the radius and diameter they are linear while the circumference is non-linear and acts as a boundary for the circle. The circumference is rather unique in that it is non-linear, it is not a straight line but curved, and it is non-random and establishes a boundary for the circle.

All the points are random and the randomness increases as the circle increases in area. Think of the points as individual life events that are totally random until we begin to create our life arrow which is similar to a vector. The randomness begins to disappear in looking back and is more linear now. However, in looking forward we still are looking at randomness in what will be the next point to attach to the vector. Chances are it will continue in the direction we have been moving, but it may not.

As I said I want to develop these thoughts; they have been kicking around in my head this summer and I need to do more reading and exploring but I wanted to get them down on paper to ponder and to get reactions from anyone who

would be interested in discussing any and all of these thoughts. I know in the past we have had some excellent discussions.

September

2022

Gap Analysis Solution to an Identified World Meteorological Organization Problem

Saturday 3 September, 2022

The World Meteorological Organization (WMO) published an important report (***WMO Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes***, ***2021***) recently which highlighted the need to increase the number of on-the-ground sensors for determining weather conditions, especially in third world countries. I would encourage anyone who has not read this report to read it; it is very enlightening.

Here are the major initiatives of the WMO – ***In particular WMO fac*ilitates and promotes:**

• The establishment of networks of observational stations to provide weather-, climate- and water-related data;

• The establishment and maintenance of data management centres and telecommunication systems for the provision and rapid exchange of weather-, climate- and water-related data;

• The creation of standards for observation and monitoring in order to ensure adequate uniformity in the practices and procedures employed worldwide and, thereby, ascertain the homogeneity of data and statistics;

• The application of science and technology in operational meteorology and hydrology to transport (air, land and maritime), water resource management, agriculture, energy, health and other focus areas;

• Activities in operational hydrology as well as closer cooperation between NMHSs in States and Territories where these are separated;

• The coordination of research and training in meteorology and related fields.

Pay particular attention to the first bullet item. Based upon the above cited report, attaining this goal has been difficult for the WMO in the least developed countries of the world, especially in sections of Africa. Here is a citation from the above report which addresses this particular goal: "WMO is playing a pioneering role in promoting impact based forecasts that inform the public of what the weather will do as well as what it will be and in fostering greater coordination between national meteorological services and their counterparts in disaster management agencies. This is leading to better prevention, preparedness and response.""But much more remains to be done. There are severe gaps in weather observations, especially in Africa and island states, which undermine the accuracy of early warningslocally and globally. Additionally, only half of 193 WMO Members have multi-hazard early warning systems. The Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework) recognizes the significant benefits of MHEWSs by incorporating them into one of its seven global targets: "Substantially increase the availability and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030"

So I am going to be rather bold here and suggest that we attempt to get the WXForum.net and a group of their best problem-solvers to work with the WMO on a plan to get PWSs established in these under-represented and least developed countries around the world. It is the old adage about "We are only as strong as our weakest link".

In continuing with the above WMO bullets, I think number 2 can be addressed through the CWOP (Citizen Weather Observation Program)

set up by the NWS. This is a unique program in which data from PWSs gets utilized by the NWS on an on-going basis. It is truly an on the ground/ grass roots type of program. I think this type of program is easily transferable after the first bullet above is dealt with. The WMO doesn't need to re-invent the wheel, there are resources and networks that already exist that can be tapped.

Geometric Modeling for Predicting Severe Weather

Friday 9 September, 2022

I have been doing a great deal of reading and discussing with others about severe weather predictions this summer. It is something I have been interested in for some time and an area that needs some major improvements since the hit rate for predictions is around 25%. As you have noticed by my previous blog posts, I have entered a new phase of my career where in addition to my research as a research psychologist and regulatory scientist, I have added my life long interest in amateur meteorology.

Generally when we talk about severe weather, super-cells are generally part of the conversation. These are those anvil looking menacing clouds that sometimes produce tornadoes. When I look at an anvil, super-cell cloud formation I see an inverted trapezoid where the top portion of the cloud is much longer than the bottom portion of the cloud that is closest to the ground. The other very significant dimension of a supper-cell cloud formation is its vertical height. I have always enjoyed building models, so I take various physical or psychological phenomena and attempt to build a model to explain very complex relationships.

When I see other cloud formations, don't get me wrong I see these beautiful cloud formations, but I also see very rectangular shapes that are more horizontal than vertical. Generally these clouds don't produce severe weather, it might be a windy day but you don't need to worry about your house being ripped off its foundation. You might get some rain from these clouds but nothing that will cause major flooding.

So you may be asking, *So What?!* Let me try to continue to build this geometric model and add just a small bit of mathematical formulas. I am wondering if the vertical height (V) of the super-cell and the top horizontal portion of the cloud (H2) might provide some clues in predicting severe weather. Is there a potential threshold in which the vertical height and the top horizontal portion of the cloud are so much larger than the bottom horizontal portion of the super-cell cloud (H1) that would help us in predicting the potential for severe weather?

V + H2 > H1 by a factor of 2xs, **and the greater the difference, the more severe is the weather.**

Also, what does Doppler Radar see when the cloud formation begins to transition into this inverted trapezoid and eventually to more of an inverted triangle which eventually becomes a tornado. Are there threshold values that correspond with this gradual transition which could be observed from a safe distance by storm chasers who send that information to the NWS Doppler Radar site.

Another potential metric that can be used rather than the factor approach above is to actually estimate the area of the cloud trapezoid (CT) in the following manner:

CT = V (H1 + H2) / 2

This formula would provide the area which then could be determined to see if there are specific cut points or thresholds where severe weather is more likely to form. Could it provide a cheat sheet or a macro-view model which along with

the sophisticated micro-level models developed using Doppler Radar would help to improve our severe weather forecasting?!

This year's theme "A Lasting Legacy" was chosen to empower people to protect the life they've built to create a lasting legacy for themselves and their families.

(3) Peak Hurricane Season Approaching

Don't let the quiet Atlantic fool you. Things can get active quickly. Check out the WRN Hurricane Preparedness webpage for infographics, social media posts, and more.

September is National Preparedness Month and the Start of the WRN Fall Safety Campaign

Sunday 11 September, 2022

With peak hurricane season approaching, extreme heat out West, and communities around the country ravaged by flood events this summer, now is always the right time to prepare.

(1) WRN Fall Safety Campaign

Three actions to stress include preparing on how you would communicate after a storm, how to assemble your emergency items, and planning your emergency meeting places.

https://www.weather.gov/wrn/fall-safety

(2) National Preparedness Month

Theory of Regulatory Compliance Utilized in Assisted Living Monitoring and Enforcement

Wednesday 28 September, 2022

Here is a very interesting article utilizing the theory of regulatory compliance in assisted living monitoring and enforcement via a national survey: ***Promoting Quality of Life and Safety in Assisted Living: A Survey of State Monitoring***

and Enforcement Agents.

Our goal was to learn about monitoring and enforcement of state assisted living (AL) regulations. Using survey responses provided in 2019 from administrative agents across 48 states, we described state agency structures, accounted for operational processes concerning monitoring and enforcement, and documented data collecting and public reporting efforts. In half of the states, oversight of AL was dispersed across three or more agencies, and administrative support varied in terms of staffing and budget allocations. Operations also varied. While most agents could deploy a range of monitoring andenforcement tools, less than half compiled data concerning inspections, violations, and penalties. Less than 10 states shared such information in a manner that was easily accessible to the public. Future research should determine how these varied administrative structures and processes deter or contribute to AL communities' efforts to implement regulations designed to promote quality of life and provide for the safety of residents.

A copy of the article is attached here:

Assisted Living Enforcement and Monitoring

Minnesota Department of Human Services Child Care Regulation Modernization Project

Thursday 29 September, 2022

Below is a presentation done by NARA – National Association for Regulatory Administration consultants regarding the Minnesota Department of Human Services Child Care Regulation Modernization Project, an innovative and cutting edge licensing and program monitoring initiative.

Minnesota DHS Child Care Regulation ModernizationDownload

NOAA Weather Ready Nation Aware September Newsletter

Friday 30 September, 2022

Here is the September issue of the Aware Newsletter for the Weather Ready Nation initiative of the NOAA. This is particularly timely given Hurricane Ian moving up the east coast. Must reading for anyone who is concerned about local weather events.

22sep_awareDownload


AMBASSADOR™
WRN
WEATHER-READY NATION

October

2022

Nomination and Initiation into Sigma Xi, the Scientific Research Honor Society

Saturday 1 October, 2022

I received this email today:

Congratulations on your nomination and initiation into Sigma Xi, The Scientific Research Honor Society! More information about your membership will be sent to your email soon.

If you have any questions concerning Sigma Xi, please do not hesitate to contact the Society's Membership Office by calling 919-549-4691.

Once again, congratulations and welcome to Sigma Xi.

Best Regards,Sigma Xi Membership and Chapter Services

SIGMA XI
THE SCIENTIFIC RESEARCH HONOR SOCIETY

And this arrived today:

Sigma Xi CertificateDownload

Province of Saskatchewan to Undertake New Study Piloting An Early Childhood Quality Indicators Tool

Tuesday 18 October, 2022

Starting this Fall-Winter 2022-2023, the **Province of Saskatchewan, Ministry of Education** will be conducting a study with the assistance of the **National Association for Regulatory Administration** on a Quality Indicators Tool (the ***Saskatchewan Early Childhood Quality Indicators Tool***). The Ministry of Education will be the first to attempt utilizing an early childhood quality tool based upon the key indicators' methodology as designed and implemented by Dr Richard Fiene, the author/creator of the methodology and the **National Association for Regulatory Administration** who is the official disseminator of the methodology.

The **Province of Saskatchewan's Ministry of Education** has been at the forefront of licensing and differential monitoring in conducting several cutting edge and groundbreaking research studies into the validation of differential monitoring, licensing key indicators and risk assessment methodologies. They are clearly in a leadership role in North America and in the world when it comes to utilizing these innovative methodologies. They are the first jurisdiction to have validated both their differential monitoring key indicator and risk assessments systems at the same time.

This Blog will keep an up to date progress report as they move forward with this initiative and the results of their pilot study (a monthly or every other month progress report will be issued via this RIKINotes Blog). The results of the study will have wide spread ramifications in attempting to improve early care and education programs in the most cost effective and efficient manner possible in both Canada and the USA, especially now with the pressures that have been placed upon the field post COVID19.

Below is the ***Final Validation Report*** that was completed last year on the Saskatchewan Differential Monitoring System which has a draft of the Quality Indicators Tool, it is towards the back of the report.

4-Saskatchewan Final Report SKECQIDownload

nara RIKI

Origins of the Saskatchewan Early Childhood Program Quality Indicators Tool

Wednesday 19 October, 2022

Many of you have asked about the origins of the Saskatchewan Early Childhood Program Quality Indicators (SKECPQI) Tool. The tool originated based upon the extension of the key indicator methodology into more program quality initiatives that have sprung up in several jurisdictions in the past two decades. These quality indicators are intended to be used alongside the licensing key indicators that have been developed in many of these respective jurisdictions.

So where did these quality indicators come from? The first couple are from the professional development arena dealing with the level of staffing and the use of a developmentally appropriate curriculum. There is an additional quality indicator which comes specifically from Saskatchewan's quality initiatives dealing with the program's environment. Another quality indicator dealing with coaching is also suggested but is still under development in Saskatchewan so it will not be utilized as part of the research pilot study in Saskatchewan.

The next two quality indicators are drawn from Quality Rating and Improvement Systems (QRIS) dealing with family engagement which became key indicators of overall quality scores in QRIS. These quality indicators build nicely off of licensing key indicators because this is an area that is not measured very often in licensing rules/regulations.

The last five quality indicators are drawn from the specific quality tools that have been utilized a great deal in the early childhood/child care research literature, the Environmental Rating Scales (ECERS, ITERS) and the Caregiver Interaction Scale (CIS). The specific quality indicators are the following: Communication and Reasoning from the ECERS, and Communication & Conversations from the ITERS; and Listening Attentively and Speak Warmly from the CIS.

There are nine quality indicators scored on a 1-4 Likert Scale similar to how the CIS is scored by assessing the adequacy of the response to each quality indicator. As stated in the above paragraph, this tool could be used in conjunction with a Licensing Key Indicator tool or a Risk Assessment tool as part of a differential monitoring approach to doing abbreviated inspections which is utilized by many jurisdictions presently. Please see previous blog posts for more information about differential monitoring and abbreviated inspections which has been suggested by the CCDBG Legislation.

NOAA Weather Ready Nation Aware Newsletters

Wednesday 26 October, 2022

Here are the most recent issues of the ***Aware Newsletter*** for the Weather Ready Nation initiative of the NOAA in chronological order. Must reading for anyone who is concerned about local weather events.

22oct_awareDownload
22nov_awareDownload
22dec_awareDownload
23jan_awareDownload

November

2022

The Basic Tenets and Implications of the Theory of Regulatory Compliance

Tuesday 1 November, 2022

The essence of the theory of regulatory compliance has to do with the law of diminishing returns as one approaches full 100% regulatory compliance. This effect related to diminishing returns applies to all industries and not just to the human services. Another tenet of the theory is the nature of regulatory compliance data being skewed and the resultant difficulty in identifying the top performers because so many mediocre performers are in the mix. With regulatory compliance, the data distribution will not be normally distributed.

The implication of the above is the need to search for the right rules rather than having full compliance with all rules. It is not cost effective or efficient to emphasize full compliance when there are specific rules that have a disproportionate impact on overall regulatory compliance and outcomes. The use of abbreviated inspections, such as key indicators and risk assessment become options in this search for the right rules. Searching for these most effective rules then makes for a more efficient monitoring system, i. e.: differential monitoring.

These are the major tenets of the theory of regulatory compliance and its implications for the regulatory science field.

Four States of Space Matrix

Friday 4 November, 2022

Presented here is a 2 x 2 matrix depicting the four state of space theory which has been posted on this blog previously.

Four States Space 2 x 2 MatrixdDownload
Here is how the above matrix fits into the original technical research papers on the same topic.

dtsc-sad-4states-combined_1Download

SSRN Top Ten Club for Authors and Papers

Sunday 13 November, 2022

I learned today that I am in the top ten clubs: (top 10% of authors) and top 10,000 downloaded papers (Theory of Regulatory Compliance) on SSRN, the repository for new research in the social sciences. See the two notifications below:

SSRN – You're in the Top 10% of AuthorsDownload
SSRN Top 10,000 Papers 2633Download

Letter to University Leadership from Concerned Faculty at Penn State

Friday 18 November, 2022

Here is a letter from over 400 Penn State Faculty members concerned about a leadership decision to not follow through with its commitment

to creating a Center for Racial Justice. Please see the following letter for the issues and the faculty who have signed on.

Letter to University Leadership from Concerned Faculty at Penn StateDownload

Our Expanding and Contracting Universe: Building off the Four States of Space

Saturday 26 November, 2022

This post will follow up and build off a previous post on the four states of space. In the four states of space it is conjectured that the basic building blocks of the universe can be dealt with by only utilizing space as a concept. In that theory, space is organized by a 2 x 2 matrix into space as empty, filled, moving or stationary. This post attempts to further simplify that 2 x 2 matrix into a dichotomy of space as either contracting or expanding. Let's be as parsimonious as possible and reduce four states to a dichotomy.

Research has inferred that the universe is expanding. Let's take that assumption and apply it to the 2 x 2 matrix model and the theory of space. Does the expansion of space apply to empty space while contraction applies to filled space (mass) being determined by gravity? An added concept is as empty space is moving/ expanding that this is our definition of time (Empty space in motion = time). And is the contraction of filled space (mass) ultimate result a black hole where gravity is at its ultimate as defined by a singularity where time no longer exists because pure space is truly stationary.

Is it possible to reduce the theory of space as defined by its four states to the delicate balance between the dichotomy of expansion and contraction? Think of our universe as a single slice of infinite flat possibilities within a sphere which expands out from the center in all directions but reaching an other limit as gravity overtakes expanding empty space (black holes are greater than the number of stars) and then contracts to a singularity and repeats the whole process all over again. Another random single flat slice within the sphere.

Quantum Relativity

Monday 28 November, 2022

Two previous posts introduced the Theory of Space as consisting of four states. This post applies the specific concept of time as empty space in motion from the Theory of Space and substitutes that concept within the General Theory of Relativity. When the General Theory of Relativity was proposed it was not known that the universe was expanding, it was assumed that the universe was in a steady state. The Theory of Space takes into account that we live within an expanding universe, constantly moving.

dt/dr = +/- 1 / (1 – (2GM/r))

In the above formula, replace ***dt*** with time = empty space in motion (***t = esm***) and how does that change how we think about the result. Prior to this adjustment we were tripping over the changes in time and space as defined within a black hole; now we are just dealing with the contraction and expansion of space within a black hole as a singularity. As filled space becomes more dense, empty space approaches infinity. There is no need for time, just space.

This adjustment can then be extended to the quantum level since we are dealing with a singularity which combines filled (mass) space with

empty space, the ultimate contraction and expansion of space. That is the missing piece of the equation. Once time is replaced by empty space in motion we have a singular model for dealing with relativity and quantum mechanics. It was time that was the major stumbling block to combining quantum mechanics with relativity.

December 2022

Real Risk versus Potential Risk in Differential Monitoring Approaches

Wednesday 14 December, 2022

There is the need to revise the risk assessment methodology that has been used in the differential monitoring approach. In the past risk assessment has always been listed along with the key indicator methodology as the two approaches for differential monitoring and abbreviated monitoring inspections. However, it has become clear that there is another level of risk within a monitoring system that should be addressed and that involves potential risk. Potential risk is the possibility that because of certain characteristics or factors possessed by a facility or program that may place it at increased risk when you observe its component parts. An example could be that a program is located in a high crime area that places clients at increased risk to harm. It doesn't guarantee that it will happen but if certain safeguards are not in place it increases the potential risk that something negative could occur.

Potential risk are variables that should be looked upon as separate from actual licensing rules or standards and should be assessed prior to a monitoring review. It would be similar to a pre-audit looking for potential predictor risks. And this is where this new concept of risk combines the previous risk assessment and key indicator methodologies. Risk assessment (RA) is what it purports to be, an assessment of morbidity or mortality risk because of non-compliance with a specific rule or standard. A key indicator (KI) is a predictor rule or standard that predicts overall regulatory compliance or program quality depending on the type of measurement undertaken. The new potential risk (PR) metric is a combination of both. It would look something like this:

RA + KI = PR

The other nuance to potential risk is that it will be very individual to a specific facility or program. No two programs are the same. What may be potential risk indicators for one program may not be for another. It will be very important to determine the proper path for each program so that they can be successful in their implementation efforts. Potential risk assessment is very individual, there probably will not be a one size fits all approach.

This post is for regulatory scientists to think about as they move forward in the further development of differential monitoring approaches, especially those approaches that involve risk assessment.

Ways of Improving Compliance Measures and Implementation: The Case in Ukraine

Tuesday 20 December, 2022

An interesting article about ways to improve compliance measures and implementation in Ukraine.

The purpose of the article is to study relatively new phenomenon of compliance (Theory of Regulatory Compliance, Fiene, 2016, 2019) for Ukraine and to identify its priority areas of development that should bring the domestic regulatory framework closer to world practice

Ways of Improving Compliance MeasuresDownload

Licensing Measurement, Regulatory Compliance, Program Quality, Quality Initiatives, ECPQIM/DMLMA: The 200th Blog Post

Monday 26 December, 2022

On the 200th RIKINotes Blog Post, I thought it would be useful to summarize the previous blog posts by the major areas of research because the research fits into neat overall buckets. The buckets build off the title of this post starting with ECPQIM/DMLMA which is shorthand for the overall model I have used to assess program quality and standards over the past 50 years. The original model actually started as a regional model I devised when I was still a psychology graduate student at Stony Brook University in New York. ECPQIM/DMLMA stands for Early Childhood Program Quality Improvement and Indicator Model/Differential Monitoring Logic Model and Algorithm.

From there, the research avenues fall into regulatory compliance and program quality sectors. In assessing these two sectors, they can be further delineated as licensing measurement and quality initiatives. And to further drill down in these research domains there is the theory of regulatory compliance and differential monitoring within licensing measurement; with coaching/mentoring and QRIS (Quality Rating and Improvement Systems) within quality initiatives.

Probably the most significant area of research and the one that has garnered the most research interest over the years has been the theory of regulatory compliance. This theory is the key to all the other areas of research because without it, several of these areas would not have occurred. For example, differential monitoring and licensing key indicators and risk assessment rules would never have come into fruition. This would have changed the ECPQIM/DMLMA modeling tremendously. But since the theory has played out in multiple studies and supported by a good deal of evidence and empirical data, it has now been used in several developing countries as their policy makers think through the best way to apply regulatory science to public policy in several different industries. That is the other wide reaching scope of the theory in that it is not pertinent only for the human services but for any industry that utilizes rules, regulations or standards.

The theory of regulatory compliance and differential monitoring form the cornerstones to human services licensing measurement, while coaching/mentoring and QRIS are the two most prominent examples of quality initiatives. The latter are more focused on the early care and education field than the human services field in general. Licensing measurement is more generic and applies throughout all human services. I have been able to fine tune several measurement strategies over the past 50 years to make measuring regulatory compliance more accurate and sensitive to changes in quality assessments. The regulatory compliance theory of diminishing returns is the paramount example and kingpin of this fine tuning.

Regulatory compliance and program quality form a delicate balance that needs to be adjusted depending upon the respective standards found in each system. This is the goal of the ECPQIM/DMLMA modeling in attempting to attain that proper balance. We want to make sure that our rules/regulations protect children but not at the expense of the best quality of services which push the envelope. I have attempted with my research to make licensing and regula-

tory compliance an equal partner with program quality and quality initiatives.

Hopefully you have found in the approximate 200 blog posts over the past decade helpful in this pursuit of increasing the overall quality of services for children and/or clients that you are responsible for serving. I encourage the interested reader to check out the blog posts, the introduction page to RIKIllc, and the selected publications page. All the above concepts and avenues of research have many examples on these pages.

Rick Fiene, Ph.D., Senior Research Psychologist/Regulatory Scientist, Research Institute for Key Indicators (RIKIllc), National Association for Regulatory Administration, and Professor of Psychology (ret), Edna Bennett Pierce Prevention Research Center, Penn State University

Creating National Standards for Any Industry: An Example from the Human Services Sector

Friday 30 December, 2022

Creating national standards for any industry based upon empirical evidence is possible in analyzing research over the past 50 years in human services. Research completed in human service regulatory science gives a pretty good blueprint in how this can be accomplished. Let's look at what has been done in early care and education (ECE), and child residential programs.

The key starting point is the unit of analysis which in ECE programs would be the facility: a child care center or home. In other industries, it could be an agency, a factory, a store, a bank, etc.... But back to the ECE example. There will be rules/regulations/standards applied to the facility, i.e., child care center or child care home. These will generally range from health and safety rules/regulations to state of the art program quality standards in most measurement protocols. Assessments will be done with many individual facilities and aggregated appropriately: regulatory compliance with rules and program quality observation tools. It is critical that an instrument based program monitoring system be utilized and not an anecdotal narrative based data collection system. It is too difficult and time consuming to analyze case studies on a large scale. Taking case studies on a sampling basis from the quantitative data base can work and provides a balance between quantitative and qualitative data analysis.

Once these data are aggregated it will be able to determine trends in the data, which rules/ regulations are most critical in predicting overall compliance, what are the key quality indicators, which rules or standards that place clients at greatest risk of morbidity and mortality, etc… It is suggested that this be done with multiple samples, these could be done regionally, statewide, nationally, etc. depending on the level of data accessibility. By doing this and utilizing factor analysis it will be able to determine are there any commonalities in the rules/regulations/standards? Generally there is!! Let's use ECE facilities as an example. In ECE, research went from individual key indicators at the state licensing agency level to generic key indicators (common rules across state licensing agencies) to a national voluntary set of standards (*Caring for Our Children Basics*). This same blueprint could be used in any industry and it would help to make for more effective and efficient monitoring systems if it were done.

Any industry that is regulated or accredited could follow the above blueprint in moving from individual sites to aggregate data and generating national, international, industry standards to follow based upon empirical evidence. And through factor analyses it would be possible to streamline the rules to a core set of the most predictive key indicators. This is how it was done in the ECE field.

For those individuals who are interested in learning more or pursuing this, take a deeper dive into this blog and the Selected Publications page of this website for details. Also, get in touch with the National Association for Regulatory Administration (NARA) who has consultants who can help design these types of measurement systems (NARA).

January

2023

The New Normal for Early Care and Education

Sunday 1 January, 2023

As we begin a new year and reflect on where early care and education (ECE) is headed, we may need to acknowledge a new normal for the field. I am sure many of my colleagues in ECE will not be happy with what I am about to share but I have always been driven by empirical data and this is what I am observing in the ECE field at this point.

We are all disappointed with the lack of action at the federal level to revamp the ECE system into a much improved and enhanced system. The opportunity was there at the beginning of the pandemic and there was a great deal of debate and discussion but it led nowhere. We are left with an ECE system having difficulty in finding adequately trained staff on a daily basis. If anything, the ECE field looks worse today then it did three years ago and that is saying alot.

So what can we do? I would suggest that we go back to the basics. The original philosophy of licensing and regulatory science is "do no harm", let's begin there. We need to make sure that all our children are in healthy and safe environments. We need to revisit the child care trilemma and focus on the availability and affordability side of the equation and put quality on the back burner again. I hate suggesting this but we have no other choice at this point or the system is going to implode. We need to make certain that our children do not lose any additional ground which has been so evident during the pandemic.

Once we have re-established a solid base, then and only then, we can begin to address quality of services via regulatory science, quality rating and improvement systems, and professional development of ECE staff: an Early Childhood Program Quality Improvement and Indicator Model. We do have several excellent examples that I have had the fortune to be part of which should provide some guidance, such as broader adoption of *Caring for Our Children Basics* as the core set of rules/regulations/standards for the ECE profession. Full implementation of the new Head Start Monitoring System and the full roll out of the iLookOut Learning Platform for ECE staff.

Revision/Updating the Regulatory Compliance Key Indicator Metric (Fiene, 2023)

Sunday 8 January, 2023

Over the past decade in utilizing the Regulatory Compliance Key Indicator Metric (RCKIm) it has become very clear that false negatives needed to be controlled for because of their potential to increase morbidity and mortality. When dealing with regulatory compliance and full compliance as the threshold for the high grouping variable in the 2 x 2 Regulatory Compliance Key Indicator Matrix (RCKIM)(see matrix below), false negatives could be either eliminated or reduced to the point of no concern.

However, in the event that substantial compliance rather than full compliance is used as the threshold for the high grouping variable in the 2 x 2 Regulatory Compliance Key Indicator Matrix (RCKIM) this becomes a problem again. There is the need to introduce a weighting factor.

In utilizing the RCKIm, the following equation/ algorithm is used to produce the Fiene Coefficient (FC):

FC = ((A)(D)) – ((B)(C)) / sqrt (WXYZ)

This RCKIm needs to be revised/updated to the following in order to take into account the need to again eliminate false negatives being generated by the results of the equation/algorithm; this can be accomplished by cubing B:

FC* = ((A)(D)) – ((B^3)(C)) / sqrt (WXYZ)

By this simple adjustment to cube (B) it will basically eliminate the use of any results in which a false negative occurs when substantial compliance is determined. The table below displays the variables of the Regulatory Compliance Key Indicator Matrix (RCKIM).

RCKIM
High RC Group
RC Low Group
Totals
KI In Compliance
A
B^3
Y
KI Out of Compliance
C
D
Z
Totals
W
X

Regulatory Compliance Key Indicator Matrix (RCKIM)

In the above examples, FC can be used when the High RC Group is at full regulatory compliance, but FC* needs to be used when the High RC Group is including substantial as well as full regulatory compliance. By using both equations/algorithms, it better deals with the results of the Regulatory Compliance Theory of Diminishing Returns.

The results should clearly show that only positive (+) coefficients will become Regulatory Compliance Key Indicators versus those rules that do not show any relationship to overall regulatory compliance (0), but now the negative (-) coefficients will more clearly show when any false negatives appear and clearly not include them as Regulatory Compliance Key Indicators. This is a major improvement in the Regulatory Compliance Key Indicator methodology which clearly demonstrates the differences in the results. It provides a gateway in those regulatory compliance data distributions where substantial regulatory compliance is heavily present while full regulatory compliance is not. This could become a problem as the regulatory science field moves forward with the use of the Regulatory Compliance Theory of Diminishing Returns. Below are some data displays to support this revision/update.

RCKIM-RCKIm FC7Download

The Key Elements for a High Quality Early Care and Education Program

Monday 16 January, 2023

Here are key elements that should be present in a high quality early care and education (ECE) program that any parent should be looking for when selecting their child care arrangement:

- Qualified ECE teachers.
- There is a stimulating and dynamic classroom environment where children are viewed as competent learners.
- A developmentally appropriate curriculum is used based upon the assessed individual needs of children.
- Opportunities for families and staff to get to know each other.
- Families receive information on their children's progress regularly using a formal process.
- Early childhood educators encourage children to communicate.
- Early childhood educators encourage children to develop reasoning skills.
- Early childhood educators listen attentively when children speak.
- Early childhood educators speak warmly to children.

Licensing Measurement, Regulatory Compliance, Regulatory Science Resources

Saturday 28 January, 2023

For those licensing and regulatory administrators, researchers, scientists, below are attached several publications that should be helpful in learning more about human services licensing measurement, regulatory compliance and regulatory science applied to the human services.

There are five resources: 1) A short and concise ebook that gives an overall view of licensing measurement and monitoring systems. 2) An anthology of research articles which provide much of the background, research, and theory behind the early childhood program quality improvement and indicator model consisting of regulatory compliance, quality initiatives, and professional development. 3) A book that compiles many of the state reports written on the differential monitoring approach and its associated methodologies. 4) The lecture slides with notes which provide the overview and an in-depth review of the model and theory. 5) And lastly, the research notes that have been written over the past decade making refinements and updating the theory, model, approach, and methodologies.

1eHandBook-key indicatorDownload
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4licensing measurement webinar slidesDownload
5Research NotesDownload

Data Distributions in Regulatory Science

Sunday 29 January, 2023

Data distributions in the human services as they relate to regulatory compliance are generally very skewed distributions which means that the majority of facilities being assessed/inspected will usually fall very close to the 100% compliance level. There will also be an equally large number of facilities that are in substantial regulatory compliance (99% – 98% compliance levels). And then there are much fewer facilities that are either at a mid or low level of regulatory compliance (97% or lower compliance levels). One might say that getting a score of 97% on anything doesn't sound like it is mediocre or low but keep in mind we are addressing basic health and safety rules and not quality standards. So having several health and safety rules out of compliance is a big deal when it comes to risk assessment. It could be argued that a state licensing agency was not upholding its gatekeeper function by allowing programs to operate with such regulatory non-compliance.

Why is the regulatory compliance data distribution important from a statistical point of view. Generally when we are dealing with social science data, the data are normally distributed or pretty close to being normally distributed. It is a trade mark of a well designed assessment tool for example. So when data are compared to other normally distributed data, there is a good chance that some form of a linear relationship will be ascertained, albeit, not reaching statistical significance in many cases but linear regardless.

When a very skewed data distribution is one of the variables as in the case with regulatory compliance data and it is compared with a normally distributed data set such as a program quality tool, ERS or CLASS. Well, the result is generally a non-linear relationship with a marked ceiling effect or plateau effect. In other words, the data distribution is more curvilinear than linear. From a practical standpoint this creates selection problems in the inability to identify the best programs that have full regulatory compliance. This can create a public policy nightmare in that those programs which are in substantial but not full regulatory compliance are as good or in some cases of higher quality than those programs in full regulatory compliance. The interesting question is does the combination of normally distributed data distributions with variables that have skewed data distributions always produce this nonlinear result?!

And lastly, will having two variables that are skewed data distributions produce a more random result than if one of the two above conditions are present?

A Potential Reason for Skewed Regulatory Compliance Data Distributions

Sunday 29 January, 2023

One thing that is ever present with regulatory compliance data distributions is that they are terribly skewed. See the previous post which provides a definition of skewed distributions and their implications. This post is going to attempt to provide a potential answer to why the data base is skewed.

At first, I was led to believe that potentially the skewness in the data was a result of the rules that being stringent enough, in other words, the health and safety standards were too easy to comply with. That could definitely be a contributing factor but this is not the case in all instances when one compares state human service rules and regulations and the Head Start Performance Standards. I think a much deeper structure may be operating that is more philosophical rather than practical.

The philosophy of regulatory compliance and rule formulation is one of risk aversion. In other words, how do we mitigate risk that potentially increases the chances of mortality or morbidity in the clients being served when a specific rule is out of compliance. This philosophy emphasizes the elimination of a risk, taking something away rather than adding to it. It is essentially, "Do No Harm". It is interesting to note that generally regulatory compliance scoring is nominal in being either "Yes" or "No"; and a lower score is better than a higher score, there are fewer violations of rules. Not the way most assessment tools are designed.

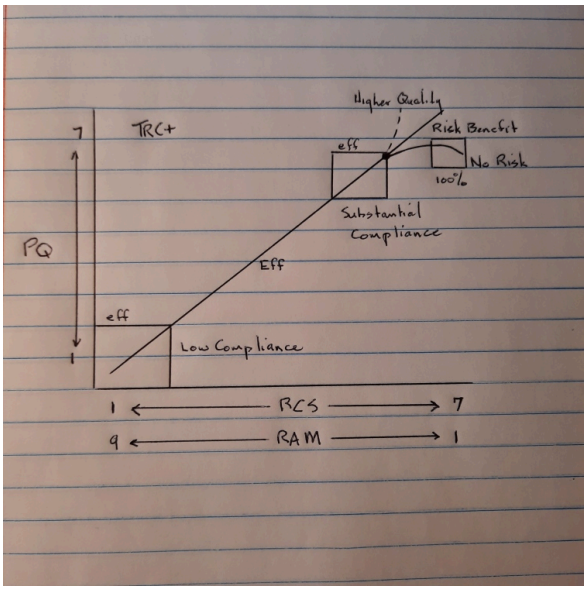
For example, when one looks at program quality, this system is based upon the open-endedness adding to rather than taking away. It is all about, "Do Good" rather than "Do No Harm". Generally when you look at the data distributions here, they are more normally distributed without the skewed nature of regulatory compliance data distributions. Generally program quality scoring is ordinal in nature on a Likert Scale. A higher score is better than a lower score. Makes sense in that when you have more of a good thing, the higher the score. And the philosophy of program quality is one of improvement with relatively little emphasis on risk aversion.

This is an alternate explanation to why regulatory compliance data distributions are so terribly skewed in comparison to other program quality measures.

TRC+: Regulatory Compliance Theory of Diminishing Returns

Sunday 29 January, 2023

Here is an updated Regulatory Compliance Theory of Diminishing Returns (TRC+)(Fiene, 2023) graphic which captures all the key elements of the theory related to risk assessment (RAM), key indicators (KIM), effectiveness (Eff), efficiency (eff), quality (PQ), risk benefit, and regulatory compliance scaling (RCS).



From the above graphic, this updates the original graphic on the RIKI Introduction Page. It places RAM and RCS in place of the regulatory compliance horizontal scale. The RCS scale is on a 7 point scale just as the PQ scale is. It also clearly demonstrates the differences between efficiency and effectiveness measures by depicting the RAM (Eff) and KIM (eff) metrics. And the essence of the theory demonstrates the curvilinear nature of the relationship between PQ and RC at the substantial compliance level. The trade offs in moving from substantial to full (100%) compliance with the benefit of no risk versus moving from substantial to higher quality benefiting the client but not reducing the risk.

The Risk Assessment Matrix and Key Indicator Matrix

Sunday 29 January, 2023

This post depicts the relationship of the risk assessment matrix (RAM) and the Key Indicator Matrix (KIM) with one embedded within the other. It clearly demonstrates how the two matrices are related by risk aversion and the mitigation of such risk for clients. This matrix builds off a previous post regarding the RAM and KIM matrices but that post dealt with more of the statistical aspects of the methodologies.

RAM + KIM

Probability

Matrices

Low

Medium

High

Low

1

2 (KIM Low)

3

Risk

Medium

4

5

6

High

7

8 (KIM High)

9

Risk Assessment Matrix (RAM) + Key Indicator Matrix (KIM)

The above matrices demonstrate how RAM deals with risk and probability of rule non-compliance while KIM deals with the distinction between medium rule non-compliance with a low compliant and a high compliant group in a more predictive fashion. The key element here is for risk aversion and to reduce risk as much as possible. Please refer back to the previous post which depicts how RAM and KIM which measure effectiveness and efficiency respectively in a differential monitoring approach as suggested through the Regulatory Compliance Theory of Diminishing Returns (TRC+). This is a delicate balancing act in determining the most effective and efficient approach utilizing the two methodologies. The purpose of the above table is to show the relationship between the two methodologies.

February
2023

Regulatory Compliance and Quality Programs

Thursday 2 February, 2023

Below is an article by Freer and Fiene (in press) to be published in the ***Journal of Regulatory Science*** this month that describes the need to balance regulatory compliance and quality addressing the constraints and opportunities for integration. It provides a unique perspective on how to develop this delicate balancing act.

Management systems for regulatory compliance and quality programs are examined in this paper from the standpoint of their potential integration and in terms of the concept of a process. The paper identifies five common drags on management system optimization and outlines a scoring system that organizations may use to evaluate their management systems for potential adoption of an integrated process-based program.

1Compliance and Quality Paper

RJKJNotes

Regulatory Science and Monitoring

Dr Fiene is a retired professor of psychology and human development (Penn State University). He has had a long career as a research psychologist and regulatory scientist and has written extensively on regulatory compliance and its applications to the human services. He is regarded as a leading international researcher/scholar on human services licensing/regulatory science measurement and differential monitoring systems. He is presently a research psychologist at the Research Institute for Key Indicators and a regulatory scientist at the National Association for Regulatory Administration.