

Detailed Timeline

Pre-1830s - Early 1800s:

Early Forms of Childcare: Human services, including childcare, exist as "cottage industries," with program monitoring and measurement conducted qualitatively through case notes and anecdotal records. (AmSci.pdf)

Circa 1830s:

First Orphanage Licensing Law in the US: Pennsylvania passes the first orphanage licensing law, predating the formal field of regulatory science by a good century. (AmSci.pdf)

Late 1960s - Early 1970s:

Slow Growth of Human Services Licensing: Licensing in human services grows slowly. (AmSci.pdf)

President Lyndon B. Johnson's Great Society Initiatives: Initiatives like Head Start are launched, leading to the rapid multiplication of childcare programs. (AmSci.pdf)

Transformation of Human Services: Human services, especially childcare, begin transforming from cottage industries to more rigid systems involving oversight, case reviews, and state agency inspections. (AmSci.pdf)

Uniform Program Monitoring Becomes the Rule: The U.S. Department of Health, Education, and Welfare (now Health and Human Services) takes over early care and education programs, establishing uniform program monitoring based on the assumption that fuller compliance linearly produces better quality. (AmSci.pdf)

Improvements by Federal Interagency Day Care Requirements (FIDCR): State-to-state variations in monitoring systems give way to improvements brought by FIDCR. (Exchange.pdf, AmSci.pdf)

Discussions on FIDCR Revision: Richard Fiene is involved in discussions about revising the FIDCR while directing the Mary Elizabeth Keister Infant Toddler Demonstration Center. (Exchange.pdf)

1970s - 1980s (specifically 1979 for differential monitoring):

Major Childcare Expansion: Significant expansion of childcare in the U.S. creates a backlog of licensing assessments, unmanageable monitoring delays, and logistical limits of case studies. (AmSci.pdf)

Empirical Evidence Challenges Linear Relationship: As expert opinion and anecdotal evidence are replaced by better-designed studies and empirical data (enabled by computerization), cracks appear in the linear relationship assumption. Researchers find that quality plateaus, and sometimes shows diminishing returns, between 98-99% compliance and 100% compliance. (AmSci.pdf)

Emergence of Differential Monitoring (1979): Richard Fiene, in discussions with federal agencies (Administration for Children, Youth and Families, Children's Bureau), proposes differential monitoring as an alternative to the uniform monitoring approach. This new approach focuses on key indicators and risk assessments. (AmSci.pdf)

Introduction of Empirical, Quantitative, Instrument-Based Approach: Advances in computing lead states to introduce this new approach, with software systems for tracking compliance and quality data. (AmSci.pdf)

1980s:

Watershed Moment for Regulatory Science: The decade marks a significant point for regulatory science related to children's programs, as quantitative analysis reveals surprising patterns. (AmSci.pdf)

Key Indicator Methodology Designed for Childcare Licensing: Richard Fiene and M. Nixon introduce the Key Indicator Methodology. (NARA.pdf, CCEEHM.pdf)

Richard Fiene's 1985 Research Papers: Fiene publishes papers on differential monitoring and the theory of regulatory compliance. (AmSci.pdf)

"The Pennsylvania Study": S. Kontos and R. Fiene publish research on child care quality and compliance. (CCEEHM.pdf, NARA.pdf)

1987:

Instrument-Based Program Monitoring for Child Welfare: Fiene and McDonald apply the key indicator methodology to child welfare. (NARA.pdf)

Early 1990s:

First Publication of "Caring for Our Children": The National Health and Safety Performance Standards are first published by the American Academy of Pediatrics (AAP), American Public Health Association (APHA), and National Resource Center for Health and Safety in Child Care (NRCHSCC). (Exchange.pdf, NARA.pdf)

Creation and Field Testing of NECPA: The National Early Childhood Program Accreditation system is created and field-tested based on an empirically-based key indicator approach, showing high correlation with NAEYC accreditation. (NARA.pdf)

1997:

Richard Fiene's Article on Child Care Trilemma: Fiene suggests an approach to solving the child care trilemma (quality, affordability, accessibility) in a "Child Care Information Exchange" article, proposing a flexible staff-child ratio tied to staff qualifications and salary. (Exchange.pdf)

2002:

Coaching/Mentoring as Effective Professional Development: Richard Fiene's research demonstrates that a coaching or mentoring approach is the most effective way to change teacher behaviors in interacting with children. (NARA.pdf)

2012:

Validation of QRIS: G. Zellman and R. Fiene publish a report on the validation of quality rating and improvement systems for early care and education. (NARA.pdf)

2014:

Identification of Key Quality Indicators within QRIS: Richard Fiene identifies Key Quality Indicators focusing on family engagement and communication within Quality Rating and Improvement Systems (QRIS). (NARA.pdf)

2015:

National Association for Regulatory Administration President's Award: Richard Fiene receives this award. (Exchange.pdf)

"Caring for Our Children Basics" (CFOCB) Proposed: The Administration for Children and Families (ACF) proposes CFOCB (approximately 65 standards) as a voluntary set of standards for early care and education. (Exchange.pdf)

Most States Allow Substantial Compliance for Licensing: Since 2015, most states shift from requiring full compliance to allowing substantial compliance for childcare facility licensing. (AmSci.pdf)

2019:

"Caring for Our Children" (4th Edition) and "Stepping Stones to Caring for Our Children" (SSCFOC) Published: CFOC is refined, and SSCFOC (distilling CFOC's 700+ standards to ~120) is published, based on risk assessment methodology. (Exchange.pdf)

Richard Fiene Publishes "A Treatise on Regulatory Compliance": This publication introduces the theory of regulatory compliance, which has a significant impact on licensing decision-making. (AmSci.pdf, Exchange.pdf, CCEEHM.pdf, NARA.pdf, Knowledge.pdf)

Richard Fiene Elected to Early Childhood Exchange Leadership Initiative: (NARA.pdf)

2020:

Richard Fiene Receives Distinguished Career Award: Awarded by the Pennsylvania Association for the Education of Young Children. (NARA.pdf, Exchange.pdf)

Identification of Predictive Indicators in Foster Care: Stevens, Fiene, Blevins, and Salzer publish on identifying predictive indicators for foster care home studies. (NARA.pdf)

2021:

Contact Hour (CH) Metric Proposed: Richard Fiene and Sonya Stevens propose the Contact Hour metric as a more effective and efficient way to measure compliance with adult-child ratios and group sizes, and as a new metric for COVID-19 thresholds. (CCEEHM.pdf, Exchange.pdf)

2022:

Federal Accounting of State Monitoring Practices: "Monitoring Practices Used in Child Care and Early Education Licensing" reports that only one state uses both key indicators and risk assessments, while others use one or neither. (AmSci.pdf)

Richard Fiene Publishes "Regulatory compliance monitoring paradigms and the relationship of regulatory compliance/licensing with program quality": (CCEEHM.pdf, NARA.pdf)

2023:

Child Care and Development Block Grant Legislation Revision: The latest revision cites differential monitoring as an alternative to uniform program monitoring. (AmSci.pdf)

Key Indicator Methodology Receives Recognized Project of the Child Impact Initiative: Richard Fiene's methodology is recognized by the World Forum Foundation. (NARA.pdf)

Regulatory Compliance and Quality Programs: Constraints and Opportunities for Integration: Freer and Fiene publish on this topic, pointing out the possibility of infusing quality indicators into the regulatory landscape. (CCEEHM.pdf, NARA.pdf)

2024:

Richard Fiene Publishes on Regulatory Compliance and Monitoring Systems: This work includes information on the "Quality Indicators tool" that has evolved from various quality systems. (CCEEHM.pdf, Exchange.pdf, NARA.pdf, Knowledge.pdf)

Ongoing Discussions on Deregulation: The National Association for the Education of Young Children (NAEYC) and Hechinger Report contribute to ongoing discussions about deregulation of early care and education standards. (Exchange.pdf)

2025 (Projected/Published in 2025 referring to current work):

Richard Fiene Publishes "Finding the Rules that Work": This article in American Scientist highlights the emerging paradigm of differential monitoring and substantial compliance. (AmSci.pdf, CCEEHM.pdf, Exchange.pdf, Knowledge.pdf, NARA.pdf)

Richard Fiene Publishes "The Uncertainty–Certainty Matrix for Licensing Decision Making, Validation, Reliability, and Differential Monitoring Studies": This article proposes a new matrix to enhance decision-making and address bias in licensing. (Knowledge.pdf, CCEEHM.pdf, NARA.pdf)

Richard Fiene Publishes "Potential Solution to the Child Care Trilemma Revisited: Finding the "Right Rules"—The Holy Grail of Early Care and Education": This article in Exchange discusses using data-driven regulatory science to address the child care trilemma. (CCEEHM.pdf, NARA.pdf)

Child Care and Early Education Heart Monitor (CCEEHM) Introduced: Richard Fiene proposes the CCEEHM as a new integrated program monitoring system, building on the Contact Hour metric and Key Indicator Methodology, and integrating structural and process quality through a software application potentially using AI and video cameras. (CCEEHM.pdf, NARA.pdf)

Development of a Regulatory Compliance Scale (RCS): Richard Fiene introduces the RCS, an ordinal scale for structural quality, aiming to put it on par with process quality from a statistical measurement perspective. (Dichotomization.pdf, NARA.pdf, Knowledge.pdf)

Dichotomization of Data for Licensing Decisions: Richard Fiene and Sonya Stevens explain the necessity of dichotomizing skewed, non-linear licensing data to reduce false positives and eliminate false negatives, improving certainty in decision-making. (Dichotomization.pdf)

Cast of Characters

Richard Fiene, PhD: A central figure in regulatory science and developmental psychology, particularly in early care and education. He is an emeritus professor of psychology at Pennsylvania State University, founding director of the Capital Area Early Childhood Research and Training Institute, and currently a Research Psychologist and Regulatory Prevention Scientist for the Research Institute for Key Indicators Data Lab (an affiliated lab with the Edna Bennett Pierce Prevention Research Center at Penn State University). Fiene has spent over four decades studying childcare regulations, leading research that developed the "theory of regulatory compliance," differential monitoring, key indicator methodology, risk assessment methodology, and the Contact Hour metric. His work has significantly impacted human services licensing measurement by advocating for substantial compliance over full compliance, and for data-driven, targeted inspections. He is recognized as a leading international researcher in these fields, having disseminated his research globally and received multiple awards for his contributions to child care quality and policy.

Sonya Stevens, EdD: A co-author with Richard Fiene on the "Child Care and Early Education Heart Monitor" and "Why Dichotomization is Needed with Skewed and Non-Linear Data Distributions..." Her affiliation is with the Edna Bennett Pierce Prevention Research Center at Penn State University and the Research Institute for Key Indicators Data Laboratory. Her work, alongside Fiene, focuses on advancing

regulatory science methodologies, particularly in the realm of licensing decision-making and data analysis for early care and education.

Lyndon B. Johnson: The American President whose "Great Society initiatives," such as Head Start, in the late 1960s to early 1970s, significantly spurred the rapid multiplication of childcare programs in the United States.

M. Nixon: Co-author with Richard Fiene on the 1985 paper, "Instrument based program monitoring and the indicator checklist for child care," which was foundational to the Key Indicator Methodology.

S. Kontos: Co-author with Richard Fiene on "Child care quality, compliance with regulations, and children's development: The Pennsylvania Study" in 1987.

Robert Freer: Co-author with Richard Fiene on the 2023 paper, "Regulatory Compliance and Quality Programs: Constraints and Opportunities for Integration," which discusses infusing quality indicators into licensing rules.

Cengiz Kahraman: Academic Editor for Richard Fiene's "The Uncertainty–Certainty Matrix for Licensing Decision Making, Validation, Reliability, and Differential Monitoring Studies" published in *Knowledge* in 2025.

Fred Rogers: Mentioned as an example of how educators should speak warmly and engage with children, akin to how he communicated on his TV show, making the audience feel like the "most important person in the world."

Gwen Morgan: Author of a 1979 NAEYC *Young Children's* article that introduced a model of child care quality, distinguishing between regulatory and non-regulatory systems. This model was a foundational attempt to comprehensively address child care quality systems.

K. Pearson: Author of "On the Theory of Contingency and Its Relation to Association and Normal Correlation" (1904), cited as the origin of the Contingency Table, which serves as a building block for Fiene's Uncertainty–Certainty Matrix.

B. Miranda, Y. Ekyalongo, A. Franchett, K. Maxwell: Authors of the 2022 federal report, "Monitoring Practices Used in Child Care and Early Education Licensing," which highlighted the limited use of both key indicators and risk assessments by states.

P.A. Trivedi: Author of "Innovation in Monitoring in Early Care and Education: Options for States" (2015), which discussed aspects of regulatory compliance and quality.

K. Maxwell, P. Harris, N. Johnson, C. Padilla, P. Banghart, A. Verhoye, D.M. Early: Authors of a 2024 literature review on child care and early education licensing, contributing to the understanding of reliability in the field.

G. Zellman: Co-author with Richard Fiene on "Validation of quality rating and improvement systems for early care and education and school-age care" (2012) and other research on QRIS validation.

M. Lahti, J. Elicker: Co-authors with G. Zellman and R. Fiene on a 2014 study validating QRIS approaches.

K.E. Kroh: Co-author with Richard Fiene on "Human Services Licensing Measurement, Regulatory Compliance, and Program Monitoring Systems" (2016).

A.L. Payne: Author of "Strong Licensing: The Foundation for a Quality Early Care and Education System" (2011).

T. Harms, R. Clifford, D. Cryer: Authors of the "Early Childhood Environmental Rating Scale" (ERS), a key tool for measuring process quality.

E.S. Peisner-Feinberg, M.R. Burchinal, M.L. Culkin, C. Howes, S.L. Kagan, N. Yazejian: Researchers whose 2001 work on the relation of preschool child-care quality to children's cognitive and social development is cited in the context of structural and process quality.

G.J. Duncan: A researcher whose 2003 work on the impacts of child care quality on children's preschool cognitive development is cited.

D.J. Duncan: (Possibly the same as G.J. Duncan, cited slightly differently) referenced regarding modeling the impacts of child care quality on children's preschool cognitive development.