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Finding the Rules that Work

An emerging paradigm promises to close the gap between regulatory compliance scores and the quality of childcare services.

Richard Fiene

An old fable recounts how a father and son, taking a donkey to market to sell it, encounter a string of critical villagers who each inform the pair they're "doing it wrong." Their efforts to please each subsequent critic end, absurdly and tragically, with them carrying the beast of burden themselves, ultimately causing its death.

Like the advice of those villagers, regulations are proffered in the name of safety and good practice. And, like that father and son, programs that try to follow every single rule to the letter may soon find themselves too weighed down to achieve (or perhaps even recall) what they set out to do. As the saying goes, "When you're up to your behind in alligators, it's hard to remember that you set out to drain the swamp."

In my four decades as a regulatory scientist studying childcare, I've seen this pattern play out time and again: In the lead-up to evaluations, staff at perfectly compliant programs spend so much time dotting i's and crossing t's that they have little left over for working with classrooms or teachers, whereas staff at slightly less compliant facilities, though equally careful about observing rules, fuss less with paperwork and work more with teachers on improving skills and curriculum.

Needless to say, developmentally appropriate curricula change kids' lives; boasting a perfect record does not. This observation neither dismisses the 200 to 400 rules and regulations set by respective U.S. states nor undermines the importance of complying with them, either as individual rules or in the aggregate. And full compliance does improve safety. But, as data gathered by my research team repeatedly demonstrates, a vague, uncomfortable gap separates full, costly regulatory compliance from program quality.

It is never about more or fewer rules; it is about which rules are really productive and which are not.

Moreover, early care and education providers often voice concerns that licensing inspectors inconsistently administer and apply particular rules. At issue, then, are not regulations' overall value per se, but rather the value of individual rules relative to fanatical box-checking. Given their limited resources, how can the early care and education fields get the most bang for their buck?

Such a discussion is long overdue. The unequal worth of many general licensing and quality standards, including those driven by a regulatory political bent rather than empirical evidence, produce markedly uneven developmental outcomes for kids. Today, an outcomes-based scientific reference frame is already influencing the human services industry (childcare, child welfare, and child and adult residential services), particularly in the early care and education fields (childcare centers and family childcare homes for children between infancy and 12 years old). The point of my team's approach, which I call the *theory of regulatory compliance*, is not to ask whether we need more or fewer rules, or more thorough or less thorough compliance, but rather to evaluate which rules truly prove effective.

Modernizing Measurement

Regulatory scientists use tools, standards, and methodologies to assess the safety, efficacy, and quality of programs under government regulation. Ideally, they help regulatory agencies achieve the best possible public health and safety outcomes.

The regulatory science field has a lot of ground to make up. At about 30 years old, it lags its subject matter by a good century (Pennsylvania passed the first orphanage licensing law in the United States almost 140 years ago). Human services licensing grew slowly prior to the late 1960s to early 1970s, when American President Lyndon B. Johnson began the Great Society initiatives such as Head Start, which kicked off the rapid multipli-

QUICK TAKE

Contrary to historical assumptions, the quality of childcare programs does not increase linearly as their compliance with rules and regulations approaches 100 percent.

All-or-nothing, one-size-fits-all approaches to compliance and licensing generate skewed data, raise risks of false negatives and false positives, and burden staff with bureaucratic tasks.

Substantial regulatory compliance is an alternative approach that emphasizes compliance with the most productive rules, preserves safety, and allows staff to concentrate more on children.

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Staff of fully compliant childcare programs say they spend too much time box-checking and not enough working with teachers, whereas staff at slightly less compliant facilities, though equally scrupulous, bother less with form-filling and spend more time in the classroom. An outcomes-based substantial regulatory compliance approach lets licensors strike that balance.

cation of childcare programs. Those decades also saw human services, especially childcare, begin transforming from cottage industries, with program monitoring and measurement conducted qualitatively via case notes and anecdotal records, to more rigid systems that entailed oversight, case reviews, and state agency inspections. In the 1970s, these systems, which often varied from state to state, gave way to improvements brought by the Federal Interagency Day Care Requirements.

The watershed moment for regulatory science as it pertains to children's programs came in the 1980s. The previous decade's major childcare expansion in the United States had created a backlog of licensing assessments, caused unmanageable monitoring delays, and laid bare the logistical limits of case studies. These factors, combined with advances in computing, led states to introduce an empirical, quantitative, and instrument-based approach, complete with sophisticated software systems designed by state agencies and private vendors to track regulatory compliance and quality assessment data. Empirical evidence not only moved regulatory science from qualitative to quantitative analysis, it also revealed surprising patterns.

But first, some background: As the U.S. Department of Health, Education, and Welfare took over running the show for all U.S. early care and education programs in the 1970s, *uniform program monitoring* had become the rule. Uniform monitoring derived from the philosophical assumption that fuller regulatory compliance would produce, linearly, better quality across U.S. early care and education programs. As the former went up, so would the latter. From a public policy standpoint, this notion sounds aspirational, but sensible: Any licensing agency looks for service quality to increase as its rules, regulations, and standards are followed.

But as expert opinion and anecdotal evidence gave way to better-designed studies and empirical data, and as larger studies became possible thanks to data computerization by state licensing agencies, cracks appeared. When researchers compared violations found during licensing reviews and inspections to the quality of the violating programs, they found that a linear relationship did indeed exist between quality and compliance—but only as one moved from low compliance levels to *substantial regulatory compliance* (that is, 98–99 percent). Between that and 100 percent compliance, quality consistently plateaued and, as some 2010s replication studies suggested, even showed diminishing returns.

A New Paradigm

These results called into question the notion that state agencies should issue licenses solely to fully compliant programs. If, as data suggested, substantially compliant programs provided the same or better care as fully compliant ones, then clearly, we needed to rethink our program evaluation strategies.

In the United States, state licensing and regulatory agencies establish childcare regulations, but federal agencies such as the Office of Child Care and the Administration for Children

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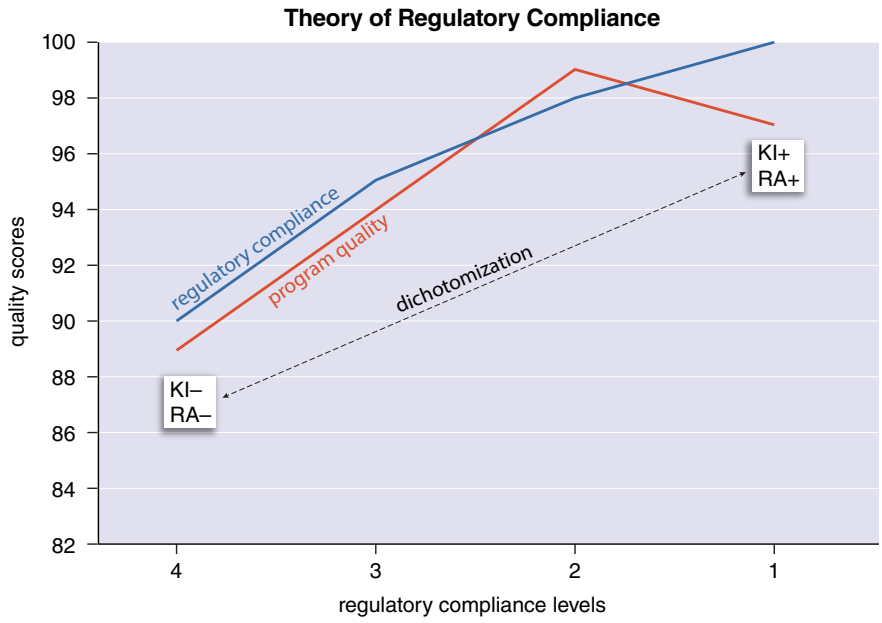

adapted from Richard Fiene

This graph shows the quality scores (*y*-axis) associated with four categories of regulatory compliance (*x*-axis, defined by the number of rules violations, ranging from 0 [Level 1] to 10 or more [Level 4]). Note that compliance scores (*blue line*) and quality scores (*red line*) rise together, but only until substantial compliance (99-97 percent compliance with all rules (Level 2) is reached. This finding argues for the adoption of substantial compliance as a standard, and for utilizing differential/relative monitoring to better capture nuances of quality and more efficiently allocate resources. The alternative—a punitive, gatekeeping licensing approach requiring full compliance (a yes/no proposition)—has led to highly skewed data. Here, the author has split (dichotomized) these skewed data into two extremes: Programs with regulatory compliance scores in the top 5-10 percent (*upper right*, labeled KI+/RA+ to indicate positive key indicator and risk assessment findings) and the bottom 5–10 percent (*lower left*, labeled KI-/RA-). The graph shows how scores in key indicators and risk assessment effectively predict program quality.

and Families also influence rules, as does Congress through its funding purse strings. Sometimes cities and counties, too, set regulations or standards, especially concerning physical environment, health, safety, and zoning. (Here, the term "regulations" means those defined by the National Association for Regulatory Administration's Licensing Curriculum.)

For an individual program or facility to operate, a state licensing agency must judge that it follows these standards. Examples include certifications for teacher qualifications, first aid, CPR, and the facility environment, along with requirements for ongoing training and professional development. State licensing staff evaluate compliance via inspections, document reviews, audits, and interviews, usually on a yearly basis. Inspections check for health, safety, cleanliness, educational standards, and staff-to-child ratios, as well as less obvious standards such as playground and transportation safety. Noncompliant programs may face fines, mandated corrective actions, training, or technical assistance, or may undergo license suspension or even permanent closure.

Licensing requirements vary depending on the childcare offered (such as family childcare homes, center-based care, or school-based programs), with larger centers typically facing more stringent requirements. Along with compliance ratings and violations issued by licensing inspectors, these facilities voluntarily seek ratings from quality initiative offices within human services agencies.

Here, and in my research, I primarily deal with center-based care programs, but the findings apply to other service types as well, such as family childcare homes and school-age programs, as well as human services categories such as child residential, child foster care, adult residential, and adult personal care homes. My data and research concern the relationship between quality and compliance, and how to improve it. They stem from studies of hundreds of programs I conducted at the state level from the 1970s through the 2010s, when I directed various research and training institutes at Pennsylvania State University. In these controlled and replicated studies, trained observers collected both regulatory data and program quality data from eight states, three Canadian provinces, and the U.S. Head Start program. The work ran the gamut, from site selection via stratified random samples, to dispatching data collectors to specific programs, to providing individual states with an overall blueprint describing how to conduct their studies.

Initially, the ceiling effect between regulatory compliance and program quality came as a surprise; we did not predict that full compliance would fail to outperform substantial compliance. It also drew pushback from the licensing field. Thus, I replicated the study many times over to assess my assumptions. But the finding persisted: Program quality scores rise with regulatory compliance until programs reach substantial compliance, after which quality declines. Although until 1980 states required childcare programs to show full compliance and zero violations, since 2015 most states have allowed licensing for facilities that are substantially compliant.

Differential Monitoring

If substantial compliance with some rules rather than full compliance with all rules best ensures the childcare program quality, then the question naturally arises: "Which rules?" Conceivably, some rules should weigh more heavily than others—say, the ones that data show most closely relate to safety and quality. Such is precisely the idea behind *differential monitoring*.

Differential monitoring emerged in 1979 during my discussions with federal agencies such as the Administration for Children, Youth and Families and the Children's Bureau, who felt dissatisfied with the traditional uniform monitoring approach. They knew about my team's work in Pennsylvania and invited me to give a series of talks to their staff. The result was a move away from the older, one-size-fits-all approach to differential methods focused on *key indicators* and *risk assessments*.

Key indicators are statistical predictors of overall compliance—rules that, if a facility follows them, strongly suggest they will follow other rules as

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well. They very efficiently determine a facility's overall regulatory compliance without requiring a comprehensive inspection. Far from negligent, this approach works because not all rules are created and monitored equally.

Risk assessment focuses on those rules and regulations which, when breached, place children at greatest risk, such as rules that deal with supervision or hazardous materials handling, among others. Generally, jurisdictions, states, and provinces engage major early care and education stakeholders (service providers, parents, advocates, and licensing staff) in weighting rules or regulations based on their risks to children's health and safety. Commonly, participants assign weights via a *Likert scale*—a common survey and questionnaire tool that lets respondents indicate the strength of their agreement or disagreement (or, in this case, their assessment of risk) with a statement about attitudes, opinions, or perceptions. The weights range from 1 to 10, where 1 indicates little risk if a program fails to follow the specific rule or regulation and 10 corresponds to high risk. Rules heavily weighted as associated with sickness, injury, or death join the risk assessment rules measured by inspectors in every differential monitoring review.

As an aside, I should point out that full compliance remains the standard for maintaining health and safety. So why incorporate risk assessments into differential monitoring and, by extension, the substantial compliance paradigm, as its own separate metric? In truth, I had no such intention when I wrote my 1985 research papers about differential monitoring and the theory of regulatory compliance. Rather, risk assessment morphed from a way to provide the needed data variance for key indicator scoring into its own submethodology. As it found its way into the implementation of national standards and guidelines, risk assessment subsequently emerged as a separate methodology.

Our findings repeatedly show that using the combined methodologies of key indicator predictor rules and risk assessment rules to identify the "right rules" and to ensure compliance with them, rather than to seek full compliance, makes the differential monitoring approach the most effective and efficient program monitoring system. Also, studies show that abbreviated, targeted, and focused reviews take approximately 50 percent less time than comprehensive reviews.

Compliance Measurement Systems

scoring level	individual rule		aggregate rules	individual rule
scale	instrument based	*scale*	differential	integrated
7	full compliance	7	full compliance	exceeds compliance
–	–	5	substantial	full compliance
–	–	3	mediocre	substantial
1	out of compliance	1	low	mediocre/low

adapted from Richard Fiene

This table compares different approaches to measuring compliance: A licensing-focused approach in which programs are classified as either compliant or noncompliant based on rules violation counts, with no middle ground (*columns 1 and 2*), and a more nuanced ordinal approach using a Likert scale. This experimental metric, called the Regulatory Compliance Scale (*column 3*), is currently being tested at the aggregate rule level (*column 4*) and may be expanded to the level of individual rules (*column 5*) in the future. Note that aggregate rule scores are not equal to the sum of all individual rule scores because not all rules are created or administered equally.

Unfortunately, although many licensing bodies use risk assessment or key indicator methodologies, few use both. *Monitoring Practices Used in Child Care and Early Education Licensing*, a federal accounting of how states conduct program monitoring, reported that 10 states used key indicators, 17 states used risk assessments, and only one state used both. Hopefully, this pattern will change as the regulatory science field matures over the coming decades.

If, as data suggested, substantially compliant programs provided the same or better care as fully compliant ones, then clearly we needed to rethink our program evaluation strategies.

Since I first proposed it in the mid-1980s, the theory of regulatory compliance has faced numerous critics in the human services licensing field, especially among advocates of uniform monitoring and full compliance. Only after years of licensing validation studies conducted by my team and others repeatedly demonstrated that full compliance did not produce the highest quality did states begin licensing programs in substantial rather than full regulatory compliance. Today, although various U.S. states apply the differential monitoring review approach unevenly, nearly all have adopted the policy of granting licenses for substantial rather than full compliance. The latest revision of the legislation for the Child Care and Development Block Grant (a U.S. federal funding program that helps states, territories, and tribes assist low-income families access affordable childcare) cites differential monitoring as an alternative to uniform program monitoring.

Of all the approaches and methodologies that flow from the theory of regulatory compliance, differential monitoring most significantly alters the program monitoring, inspection, review, and licensing landscape. Its reviews occur just as often as do uniform monitoring assessments but focus specifically on rule breaches shown to place children at risk. That said, differential monitoring did not replace but rather supplemented its predecessor: Comprehensive reviews must still occur every three to four years to validate the performance of key indicators and risk assessment rules. But what does that report card look like in terms of analyzable data?

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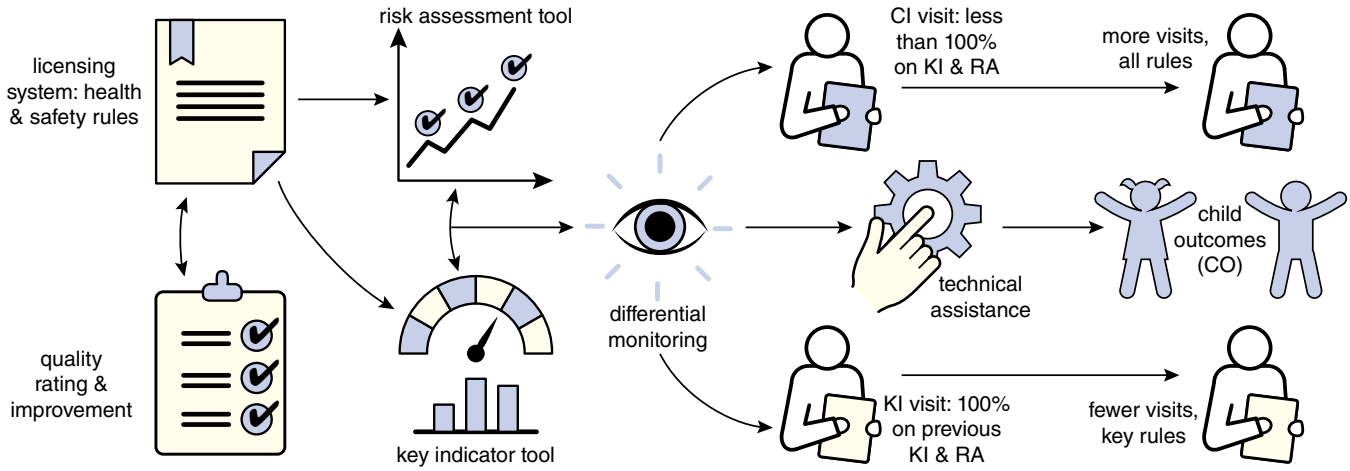

Barbara Aulicino

This illustration shows the various components that contribute to a differential monitoring approach and how agencies can use them to evaluate the effectiveness and validity of different approaches. Differential monitoring allocates resources based on risk assessment (client morbidity and/or mortality) and key indicators (rules whose compliance is strongly predictive of program quality). These data, provided by mandatory licensing processes and voluntary quality rating services, reveals which programs are highly compliant with key rules (though not all rules) and therefore require fewer visits versus programs that are less compliant and require additional visits and technical assistance to achieve similar child outcomes.

Rethinking Nominal Data

Traditionally, licensing data are categorical (sorted into groups such as "approved" or "denied"), unordered (there's no built-in way for such groups to be sequenced), and mutually exclusive (state agencies cannot simultaneously deem a facility both "approved" and "denied"). In statistical terms, such data are nominal, like a table listing cars by make or model; you cannot "do math" on such a table like you can on, say, on a table listing automobile curb weights and fuel economies. It is also binary: A program either follows a rule, or it doesn't.

Presently most jurisdictions deal in these absolutes and exclude gray areas. This approach, much like uniform program monitoring and full compliance, makes intuitive sense: We create rules and regulations because we believe in the value of following them, and because licenses mean nothing if licensees are not held to a standard. But here again, we must look deeper and ask, "What consequences follow from this either/or approach to measuring compliance, and who decides whether or not a particular box gets checked?"

Let's begin with the latter question. In an ideal world, judgments made by assessors would perfectly reflect a program's actual regulatory compliance state. But research that tests reliability and replicability in the licensing field empirically shows a concerning degree of disagreement when a second observer validates the decision regarding regulatory compliance. These disagreements suggest a worrying number of false positives and false negatives.

A false positive occurs when a program follows a rule or regulation, but the assessor rules that the facility is noncompliant (which might sound backwards, but the metric is *non*compliance, not compliance, so finding a false violation means finding a false positive). But even more concerning are false negatives, in which an evaluator says a program complies with a rule that it breaches, thereby placing clients at risk. Detecting false negatives is one of the chief reasons we periodically validate the predictive value of key indicator rules through comprehensive reviews.

As for the first question, the answer is simple: Nominal, binary licensing data is severely skewed. Upon reflection, the reason becomes obvious. When a regulated industry such as childcare mandates compliance before a program can operate and excludes gray areas, most facilities will achieve full compliance or lose their licenses. Because unlicensed providers don't last long, the childcare sector produces data that skew toward licensed programs. To grasp such skewed continuous or multicategory data, we must first dichotomize it into two distinct groups.

Such sorting into piles raises statisticians' hackles; unless carefully done, it accentuates differences and forces tradeoffs between precision and sensitivity, which can mean swapping false positives for false negatives. But the nature of licensing data—a skewed collection of mostly or fully compliant programs dumped in a single bucket—makes the split both necessary and warranted. By setting a threshold of certainty or agreement among evaluators, we can more effectively reduce false negatives, that is, cases in which evaluators say a program follows a rule when it doesn't.

This need becomes even clearer when one considers the demands posed by differential monitoring and its methodologies, key indicators, and risk assessments. For a program to receive licensure, it is not enough to ask if it "complies enough overall"; we must also know if it follows the specific rules that most ensure safety. By comparing highly compliant programs only with low-compliant programs, we accentuate the differences between the two and bolster our data analyses as well as overall safety. This comports well with licensing decision-making, which can consider a program compliant or noncompliant not only in aggregate, but with respect to *individual* rules.

Infusing Quality

The all-or-nothing approach to regulatory compliance and licensing fails as a standard because it generates skewed data, raises the risks of false negatives and false positives, and springs from a false assumption that program quality increases in step with 100 percent compliance. But I am far from the first

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to notice that approach's weaknesses in evaluating how good a program or facility actually is. Indeed, its shortcomings helped drive the creation of a separate industry of voluntary accreditation programs such as the National Association for the Education of Young Children, state-run quality rating and improvement systems, and third-party tools and assessments. It's time we folded quality assessments into regulatory compliance.

I have already explained how the theory of regulatory compliance improves program quality and safety by focusing on substantial, not full, compliance and by using differential monitoring to ensure programs follow the most protective and impactful rules. But to further cast off the limitations and lopsidedness of a uniform monitoring and full compliance mindset, and to make room for data capable of tracking quality, we must also replace rigid either/or logic with a more nuanced ordinal measurement: a scaling technique.

Recall that assessors can evaluate compliance in two ways: They can consider aggregate rules—collections of rules that fall into categories such as staffing or safety practices—or individual rules. Each has its own studies and research literature. Research on aggregate rules from the 1970s, 1980s, and the 2010s established substantial compliance as a "sweet spot" of best outcomes and showed that the time had come to replace nominal metrics (such as "compliant" and "noncompliant") with ordinal ones (such as "98 percent compliant").

Inspired by this research, I have proposed replacing older nominal techniques with an ordinal scale like the Likert scale already used in quality measurements (usually but not always ranging from 1–7, with 1 being inadequate and 7 being excellent). This technique, currently under review by the National Association for Regulatory Administration, will help reviewers consider the importance of substantial compliance. Moreover, it will add the currently absent quality elements to each rule and regulation. However, this approach involves aggregate rules only; further research is needed to determine if the same shift from nominal to ordinal metrics should also occur at the individual rule level.

Should those findings bear out the value of evaluating individual rules via the 1–7 regulatory compliance scale, I propose that it should contain the following categories: exceeding full compliance, full compliance, substantial compliance, and mediocre compliance (*see figure on page 19*). These categories differ from the aggregate rule compliance scale currently under evaluation (full, substantial, mediocre, and low compliance) because aggregate compliance only considers health and safety elements, whereas an individual scale would also take quality into account.

Research supports the value of transitioning from uniform monitoring and full compliance to differential monitoring and substantial compliance. Practice has shown the value of retaining the older to help ensure the validity of the newer. Looking to the future, I believe we can further improve compliance evaluations by developing and evaluating *integrative monitoring*, which incorporates program quality into rule formulation and moves the key indicators from predicting compliance to forecasting quality.

The all-or-nothing approach fails as a standard because it generates skewed data, raises the risks of false negatives and false positives, and springs from the false assumption that program quality increases in step with 100 percent compliance.

Looking Forward

The regulatory compliance scale is a new and evolving metric. It transforms licensing data from a mere violation tally into a more useful and intuitive scale, one more consistent with the program quality measurements supported by research. Hereafter, I hope that the approach will incorporate quality measurements and more nuanced weighting into the evaluation of individual rule compliance. But discussions are just beginning, and this shift will pose a substantial challenge for agencies, which must also cope with the aftermath of the COVID-19 pandemic and a rising tendency toward deregulation.

The theory of regulatory compliance concerns the relationship between regulatory compliance and program quality, not health and safety, where full compliance remains the goal. It is, however, the preferred methodology for eliminating false negatives and decreasing false positives. Add to that the fact that the theory of regulatory compliance predicts a nonlinear relationship between compliance and quality but a linear relationship linking regulatory compliance and safety, and regulatory scientists clearly have our work cut out for us. Untying this knot will require greater collaboration between the historically siloed public policy worlds of licensing, accreditation, quality rating and improvement systems, and professional development systems.

I hope that the regulatory science field takes these paradigm shifts into consideration as it builds licensing decision-making systems and considers how states issue licenses. And although this work deals primarily with my own experience in the early care and education field, I wonder if other human service sectors, such as the foster care or child and adult residential areas, demonstrate similar patterns. Other disciplines that deal with regulations and compliance may similarly find it fruitful to discuss the nuances of their own evaluation metrics in order to achieve the best overall outcome with the most efficient use of limited resources.

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