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Promotion of Early Childhood Development and Mental Health in Quality Rating and Improvement Systems for Early Care and Education: A Review of State Quality Indicators

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Abstract

In the United States (U.S.), quality rating and improvement systems (QRIS) are used by many states to incentivize quality in ECE and may be a viable lever for promoting early childhood development and mental health on a population level. We conducted a qualitative review of publicly available data on state QRIS indicators to better understand how states incorporate evidence-informed early childhood development and mental health promotion standards in QRIS. We systematically compared QRIS indicators for 41 U.S. states with child development and mental health promotion quality standards from *Caring for Our Children National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition*, as of March/April 2020. Of those, 39 states included at least one indicator consistent with child development or mental health promotion standards, including practices that can lead to early detection of developmental delays such as developmental monitoring, activities or curriculum addressing developmental domains, and regular communication and resource-sharing with parents/guardians. Opportunities exist within states for incorporating more specific guidance within indicators, such as use of childcare health consultants and advocates, validated screening tools, parent/guardian participation or input in developmental monitoring and screening, and staff training on family engagement. We found that in most states QRIS indicators offer guidance for ECE systems to support and monitor early development and foster mental health, with opportunities to enhance guidance. Findings point to QRIS as a viable opportunity for promotion of early childhood development and mental health standards in ECE systems.

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Keywords

Early Childhood Development; Children's Mental Health; Quality Early Care and Education; Early Identification; Quality Rating and Improvement Systems; Children's Health Equity; Health Promotion

Early life experiences and caregiving relationships play a critical role in supporting development and fostering mental health across the lifespan (Flensburg-Madsen & Mortensen, 2018). In the recent advisory report on the ongoing national children's mental health crisis, the United States (U.S.) Surgeon General called for ensuring access to quality early care and education (ECE) and promotion of healthy development in education and child care settings as among the critical systems-level priorities for equitable promotion of mental health and resilience among U.S. children (Office of the Surgeon General [OSG], 2021). Quality rating and improvement systems (QRIS), also referred to as quality improvement systems (QIS), are one approach employed in U.S. states to incentivize and support quality in ECE systems (National Academies of Sciences, Engineering, and Medicine [NASEM], 2019b). While the structure of QRIS varies by state, many QRIS use quality indicators to define quality and guide incentive and support programs for ECE systems (Kirby et al., 2015). However, the degree to which state QRIS employ indicators relevant to promotion of early childhood development and mental health has not been systematically assessed.

Early promotion of children's social and emotional development and mental health on a population level is especially salient given the prevalence of mental health conditions among U.S. children (Bitsko et al., 2022); approximately 40% meet the criteria for having a mental disorder before their 18th birthday (Jaffee et al., 2005; Merikangas et al., 2010). Mental health conditions can emerge during early childhood, with approximately 2% of 3–5-year-olds having ever received a diagnosis of attention-deficit/hyperactivity disorder, anxiety, or autism spectrum disorder, and 5% having ever received a diagnosis of behavior problems during 2016–2019 (Bitsko et al., 2022). Meanwhile, about one in six U.S. children aged 3–17 years has been identified with a developmental delay or disability and they often have increased needs for health care and services (Cogswell et al., 2022). Though recent analyses show improvements in the early identification of children with autism spectrum disorder in particular, progress is still needed to ensure children can receive needed early intervention and services (Shaw et al., 2021). Furthermore, social and economic impacts of the COVID-19 pandemic have had detrimental effects on the mental health of U.S. children (American Academy of Pediatrics, 2021; Leeb et al., 2020; OSG, 2021) and have likely also affected access to early identification of developmental delays and disability and early intervention (Centers for Disease Control and Prevention, 2022; Infant and Toddler Coordinators Association, 2020).

Quality ECE can promote early development and mental health by providing positive, safe environments with developmentally supportive learning opportunities and secure caregiving relationships. Quality ECE can achieve this by engaging with parents/guardians and supporting responsive caregiving, and by monitoring development to identify developmental, behavioral, and social-emotional concerns and facilitate linkage to indicated interventions

(NASEM, 2019b). Furthermore, ensuring availability of quality ECE among children of color and families with low incomes represents a promising health equity strategy for reducing disparities in child development and school readiness, educational achievement, and long-term mental and physical health (Braveman, 2018; Holochwost et al., 2021; NASEM, 2019a, 2019b).

While the majority of research establishing associations between quality ECE and child health and developmental outcomes has been limited to school and center-based ECE programs, it is estimated that close to 10 million U.S. children are cared for in family child care or other home-based settings (Jiashan & Natzke, 2021; NASEM, 2019b). Some racial/ethnic groups, families for whom one or both parents speak a language other than English, and those with low incomes may be more likely to utilize family child care, as well as parents/guardians of infants and toddlers (Jiashan & Natzke, 2021). Therefore, including family child care in efforts to promote access to quality ECE has been identified as an important element of effective system-level strategies to advance racial and economic equity and prevent perpetuating disparities in related child outcomes (BUILD Initiative & QRIS National Learning Network, 2019; Meek, 2020; NASEM, 2019b)

Defining Quality in ECE: *Caring for Our Children*

Characteristics of quality ECE programs have been supported by subject-matter experts and through scientific research identifying associations with positive child outcomes (American Academy of Pediatrics et al., 2019; Soliday Hong et al., 2019). The National Resource Center for Health and Safety in Child Care and Early Education (NRC), the American Academy of Pediatrics (AAP), and the American Public Health Association (APHA) publish national standards for quality in ECE in *Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs* (American Academy of Pediatrics et al., 2019). *Caring for Our Children* is a widely used and influential resource that offers a comprehensive list of evidence-informed standards of quality for ECE programs, updated continuously based on evolving scientific evidence with review and input from experts representing fields of early childhood development, health, and safety, as well as parents/guardians, ECE providers and advocates, and other key audiences (American Academy of Pediatrics et al., 2019). *Caring for Our Children* is inclusive of standards highly relevant to promotion of early development and mental health. For each standard, *Caring for Our Children* provides a rationale for inclusion that outlines evidence available in support of the standard (peer reviewed scientific studies, published reports, and best practice information) that justifies why each standard is an important benchmark of quality. Researchers have compared the national standards contained within *Caring for Our Children* to indicators within state QRIS to assess high impact obesity prevention practices in ECE (Geary et al., 2017, Hall et al., 2022). Grossman and colleagues similarly assessed how *Caring for Our Children* national standards related to child abuse prevention were reflected in ECE licensing regulations in all 50 states (Grossman et al., 2022). These types of analyses highlight how quality improvement systems and ECE policy align with the best practices put forth in the *Caring for Our Children* standards and can inform practitioners and decision makers.

Quality Rating and Improvement Systems

QRIS was originally developed to bridge a gap between basic licensing requirements and accreditation from a U.S. national accrediting organization, which can be difficult to achieve for some ECE providers (Quality Compendium, 2022a). Since the first QRIS was launched in 1997, an increasing number of states employ QRIS to incentivize and guide quality in ECE systems. An analysis from one national U.S. sample of providers estimated that approximately one-third of center-based programs participated in a QRIS in 2012 (Jenkins et al., 2021). Though QRIS varies across states, the core components include rating ECE programs through quality indicators and supporting quality improvement with outreach, technical assistance, coaching, and distributing grants and awards (NASEM, 2019b; Quality Compendium, 2020).

QRIS evaluation and research has involved predominantly validation, implementation, or quality improvement studies in single state systems. The U.S. Federal Government has invested funding for validation studies in states that aimed to explore the relationships between QRIS indicators and measures of quality in ECE (Boller & Maxwell, 2015; Goffin & Barnett, 2015). Observational studies have demonstrated significant, but often small or inconsistent associations of QRIS ratings and overall quality improvement of participating programs (Soliday Hong et al., 2019; Tout et al., 2017; Yazejian & Iruka, 2015). Observational studies have also demonstrated moderate associations of QRIS quality ratings with child outcomes, including social emotional development and executive function (NASEM, 2019b; Soliday Hong et al., 2019; Tout et al., 2017). Recently, the first longitudinal study of child outcomes in QRIS has shown higher scores on developmental assessments among toddlers who were in ECE programs with higher QRIS quality ratings compared to those in lower rated QRIS programs (Elicker et al., 2022) though often study design of QRIS research does not allow for causal inferences about QRIS program participation and child outcomes (Boller & Maxwell, 2015).

Few studies have compared QRIS policy across states. Connors and Morris (2015) evaluated differences between licensing regulations and QRIS indicators across 50 states and The District of Columbia (D.C) using a policy measurement index they developed to describe four dimensions of quality found in these policies (classroom structure, program structure, classroom process, and program process) (Connors & Morris, 2015). States were then clustered into groups based on their index scores and 6 different state policy profiles emerged. The study found that classroom process quality, which encompasses interactions and relationships between and among teachers and children, was more strongly represented in QRIS than in ECE licensing. In an attempt to compare all state QRIS against best practice guidelines, a 2017 study by Geary, Dooyema, and Reynolds systematically reviewed all publicly available statewide QRIS documents as of early 2015 to identify and quantify indicators aligned with 47 evidence-informed, high impact obesity prevention guidelines from *Caring for Our Children*. If a QRIS indicator contained language that matched either fully or partially with one or more of the 47 *Caring for Our Children* guidelines, it was counted as present. Geary and colleagues concluded that QRIS was a viable system-level lever for obesity prevention in ECE and suggested that their methodology could be used by other researchers to study the inclusion of other *Caring for Our Children* standards.

The authors also noted limitations to this approach, including reliance on publicly available QRIS materials from states' websites, reliance on subjective interpretations of states' QRIS standards, and exclusion of state licensing regulation documents, which are sometimes the basis of the lowest QRIS quality rating for the state (Geary et al., 2017). Geary and colleagues have updated their analysis and have identified increases between 2015 and 2020 in inclusion of the 47 *Caring for Our Children* obesity prevention guidelines in QRIS (Hall et al., 2022). Applying the methodology of Geary, Dooyema, and Reynolds to assess promotion of early childhood development and mental health in QRIS indicators may enhance understanding of the role that QRIS can play in supporting early development and mental health in ECE systems.

The Present Study

Increasing availability of high quality, developmentally supportive ECE programs is a key system-level strategy to equitably promote child development and foster children's mental health (NASEM, 2019a; OSG, 2021). QRIS is a strategy to increase availability of such high-quality programs (NASEM, 2019b), however, there is variability in QRIS structure and quality indicators across U.S. states and the extent to which state systems employ evidence-informed QRIS indicators relevant to promotion of early childhood development and mental health and whether these indicators apply to settings beyond center-based ECE has not been systematically assessed. Guided by the methodology of Geary, Dooyema, and Reynolds (2017) and Hall, Geary, Lowry Warnock, and Dooyema (2022), we sought to assess the extent to which QRIS indicators promote evidence-informed child development and mental health standards in center-based ECE and family child care through systematic collection, qualitative review, and quantitative summary of QRIS indicators consistent with relevant *Caring for Our Children* quality standards. We focused our review and summary of the indicators on addressing two research questions:

1. To what extent do QRIS indicators employed across U.S. states support evidence-informed child development and mental health promotion standards from *Caring for Our Children*?
2. To what extent are these evidence-informed QRIS indicators applied to center-based ECE, family child care settings, or both?

Comparisons of QRIS indicators both to national, evidence-informed quality standards and across state QRIS programs may raise awareness among leaders and inform promotion of early childhood development and mental health in their own ECE systems.

Materials and Methods

Data Collection and Criteria for Inclusion

QRIS indicators are often publicly available and can be identified and accessed through the Quality Compendium's *Catalogue of QRIS Initiatives*, a comprehensive database with information on all QRIS currently in place and with links to QRIS indicator documents or websites (Quality Compendium, 2020). We used the Quality Compendium's database *Catalogue of QRIS Initiatives* to identify QRIS in place at any point during March 24th

through April 13th of 2020 (Quality Compendium,). During this time period, one author reviewed all state profiles on the Quality Compendium to 1) identify states with a statewide QRIS currently in place, and 2) systematically collect and compile documents or webpages outlining specific QRIS indicators for each state using the links provided in the Quality Compendium. A second author then reviewed QRIS webpages for each state QRIS to verify that all relevant and available QRIS indicator documents had been identified and downloaded. In one case, the research team contacted a state QRIS director directly by email to obtain QRIS indicator documents because they were not available or easy to locate through the Quality Compendium or on public websites.

Inclusion of state QRIS documents in the analysis was determined based on the following criteria: 1) initiative was listed in the Quality Compendium's *Catalogue of QRIS Initiatives*; 2) initiative included statewide or universal regional QRIS indicators (for QRIS that operate at the regional/county level but with select indicators applied universally); 3) initiative was in place at any point within the defined period of data collection and was not in a pilot or developmental phase. We identified a total of 41 states operating QRIS for inclusion in the analysis, including D.C., and California's universal indicators applied to regional QRIS implementation.

Data Analysis

We conducted a directed content analysis of QRIS indicators for the 41 state initiatives identified. Content analysis is an approach to analyzing text data which can incorporate elements of qualitative and quantitative analysis. Directed content analysis is guided by a predefined theory or evidence from prior research, as opposed to conventional content analysis, which allows categorization and theory to emerge from the data (Hsieh & Shannon, 2005). Directed content analysis was selected as the methodological approach for this study, given our interest in identifying QRIS indicators consistent with pre-defined quality standards based on prior research in the fields of early childhood development (American Academy of Pediatrics et al., 2019). In order to identify, sort, and quantify QRIS indicators relevant to promotion of early childhood development and mental health, we employed directed content analysis by developing a codebook based on evidence-informed quality standards from *Caring for Our Children* (American Academy of Pediatrics et al., 2019) before engaging in the process of independent coding of state QRIS indicators, discussion and resolution of coding discrepancies, and codebook refinement by a team of three authors. Our iterative coding process was adapted from the template analysis approach, a method of coding qualitative data often applied to thematic analysis (Brooks et al., 2015).

The codebook was drafted and organized prior to coding the QRIS indicators, with revisions and refinements made throughout the iterative coding process. Deductive codes (developed a-priori) were derived from *Caring for Our Children* quality standards (American Academy of Pediatrics et al., 2019) relevant to promotion of early childhood development and mental health and were organized by category. To identify *Caring for Our Children* quality standards from which to derive codes for the analysis, members of the research team with expertise in early childhood development read through all standards twice and generated a list of those recognized as relevant to promotion of early childhood development and mental

health in ECE. The team then reviewed and refined the list of selected standards before reformatting each standard description as a code definition and assigning each a brief code label. Two subject-matter experts external to the research team were then invited to review these preliminary codes and code definitions to ensure they were inclusive of ECE quality standards most salient to promotion of early childhood development and mental health, and to identify any critical gaps.

A total of 26 deductive codes were defined based on *Caring for Our Children* standards with subject-matter expert input. An additional 6 codes were developed inductively, (during the coding process) based on specific staff trainings, professional certificates, and classroom rating or assessment systems described within QRIS indicators. These trainings, certificates, or assessments were recognized by researchers as very likely to encompass one or more *Caring for Our Children* quality standards represented by the 26 deductive codes and were thus deemed relevant to include in data collection. The codebook was organized by sorting all inductive and deductive codes into five categories or coding themes: (1) *developmental monitoring, screening, and referral* (8 codes), (2) *classroom procedures and environment* (12 codes), (3) *staff/caregiver training and support* (6 codes), (4) *health advocates and consultants* (2 codes), and (5) *parent/guardian engagement* (4 codes). Table 1 lists all 32 primary codes (including 26 deductive and 6 inductive codes) and their definitions by theme, as well as examples of corresponding coded QRIS indicators; examples presented were selected as exemplary representations of the *Caring for Our Children* -derived codes. Functional subcodes were also generated to identify whether each coded indicator (or an equivalent indicator also meeting the code definition) applied to center-based ECE, family child care, or both settings.

Two researchers independently coded all indicators in the compiled state QRIS documents using Microsoft Excel. Researchers only coded indicators which were clearly identified in the documents as part of the state QRIS rating criteria. Indicators were coded regardless of whether conditions outlined in the codebook definition and the corresponding *Caring for Our Children* standard were fully or partially met. For example, the code *opportunities for parents/ guardians to observe staff facilitating child development* was derived from a *Caring for Our Children* quality standard which stated, “Parents/guardians should be given opportunities to observe staff members modeling healthy and safe behavior and facilitating child development,” whereas the code was applied to any QRIS indicator suggesting opportunities for parent participation in or observation of classroom or program activities.

The iterative, cyclical coding process consisted of the following steps: 1) independent coding of 2-3 states’ QRIS indicators by two authors; 2) discussion of coding and resolution of discrepancies by authors; and 3) changes to the codebook such as revision of codebook definitions or addition of inductive codes, as needed. Changes to code definitions were made throughout the coding process to improve coding efficiency and inter-coder agreement. All codebook revisions were approved by the entire research team. Once QRIS indicators for all states were independently coded and reviewed, the final codebook was then re-applied to all states’ QRIS indicators (Brooks et al., 2015). Inter-rater reliability was calculated following completion of the final round of coding based on independent re-coding of data from 20% of states by two researchers by dividing the total number of codes assigned

to each states' indicators by the number of codes in agreement with coding by a second researcher (McHugh, 2012). Inter-rater reliability calculated as percent coding agreement among researchers was 81.5%, pointing to reliability of results. Microsoft Excel Pivot Tables were used to generate counts of statewide QRIS with coded indicators by individual codes and by overarching category of promotion, stratified by program type (center-based, family child care, or unspecified). Researchers identified individual codes and categories of promotion most and least often employed by QRIS indicators. Patterns in the content and quantity of coded indicators were explored and described. This study was exempt from review by an Institutional Review Board due to use of publicly available data (online QRIS documents).

Results

Of the 41 statewide QRIS identified, 95% (n=39) included at least 1 indicator consistent with *Caring for Our Children's* evidence-based guidance for promotion of child development and mental health. The remaining two QRIS (Louisiana and Washington, across 50 states) based indicators entirely on other ECE classroom assessments or rating systems without describing specific criteria used for those assessments/systems, but which were recognized by the authors as potentially relevant to *Caring for Our Children* standards within the *classroom procedures and environment* coding theme. Table 2 includes lists and counts of QRIS with at least one indicator identified as fully or partially aligned with each *Caring for Our Children* standard (2019) or which described potentially relevant ECE trainings, assessments, or rating systems, stratified by coding theme and by ECE program type (centers or family child care). The majority of coding themes were represented in indicators for the QRIS we assessed; 100% (n=41) had at least one indicator coded as *classroom procedures and environment*, 95% had at least one indicator coded as *staff/caregiver training and support* (n=39), 85% had at least one indicator coded as *parent/guardian engagement* (n=35), and 83% had at least one indicator coded as *developmental monitoring, screening, and referral* (n=34). However, only 24% of state QRIS systems reviewed (n=10) included at least one indicator for *health advocates and consultants*. Fig. 1 illustrates the distribution of coded indicators across the five themes, as well as by ECE type to which coded indicators applied. Of the 504 total indicators coded, 35% were coded as *developmental monitoring, screening, and referral* (n = 178), while only 2% (n = 10) were coded as *health advocates and consultants*. Many coded indicators applied to both family child care and center-based ECE programs, with over 75% of coded indicators within each theme applying to both family child care and centers (Fig. 1). However, coded indicators applied to center-based ECE programs more often than family child care in every category except *health advocates and consultants*.

Developmental Monitoring, Screening, and Referral

Many QRIS included indicators for *developmental monitoring, screening, and referral*, however, there was variability in the level of detail included in indicators relevant to this theme and many QRIS did not include indicators related to communication or collaboration with parents/guardians or other providers on developmental monitoring or screening. Some of the most frequently applied codes within this theme included *caregivers/teachers monitor*

children's development (n=31 or 91%), *program utilizes validated developmental screening tool* (n=23 or 68%), and *if screening results in concern, child referred to their primary care provider (medical home) or to an appropriate specialist or clinic for further evaluation* (n=21 or 62%). Fewer states included QRIS indicators coded as *caregivers/teachers share results of developmental screening or monitoring with parents/guardians* (n=17 or 50%), *caregivers/teachers provide child development resource information to parents as needed* (n=14 or 41%), *caregivers/teachers gather input from parents/guardians to monitor children's development* (n=8 or 24%), and *developmental screening includes parent/guardian consent or participation* (n=3 or 9%). No states included indicators coded as *caregivers/teachers gather input on development from healthcare providers, consultants, and/or other staff who know the child*.

The level of detail offered by QRIS indicators coded as *caregivers/teachers monitor children's development* differed by state. For example, California's indicator describes the process, setting, and content of developmental assessments; "Assessment of children's growth and development is an ongoing process and is conducted during children's daily activities and routines to assess progress in the 4 domain areas of social, emotional, cognitive and physical development" Meanwhile, several other state standards coded as *caregivers/teachers monitor children's development* offered less detail about the processes, but more about the intent, for example, "Developmental monitoring tools are used to provide early detection of health-related issues and developmental delays to support early intervention" (Georgia).

Staff/Caregiver Training and Support

A large proportion of initiatives included indicators relevant to *staff/caregiver training and support*, however, many indicators did not specify topics or content of staff trainings, and fewer indicators were identified related to supporting staff health and wellbeing. The majority of initiatives (n=37 or 95%) were coded *pre-service and/or continuing education training required but defined elsewhere* and were not described in the QRIS indicator language, such as in the following example from Rhode Island's indicators: "Professional Development Plan: All teachers/the educator have a written individual professional development plan aligned with RI's Workforce Knowledge and Competencies." Just over half of state systems (n=22 or 56%) included a QRIS indicator for *caregivers/teachers complete continuing education training and/or orientation on child development*, and 18 of those indicators clearly applied to both centers and family child care. For example, one of New Mexico's QRIS professional development indicators for both centers and family child care stated, "At least one educator per classroom (preferably the lead educator) must have successfully completed: Child Growth, Development, & Learning." QRIS indicators for twenty-one state systems included a requirement for *caregivers/teachers have Child Development Associate credential (CDA)*. Twelve states mentioned implementation of and/or training related to *Strengthening Families: A Protective Factors Framework*, a framework which includes content related to building trusting, supportive relationships with parents/guardians (Harper Browne, 2016). Only nine state systems included at least one indicator for *continuing education training/orientation covers relationships with families*, including the following example from Illinois state indicators for family child care:

“FCC [family child care] Provider has completed ExceleRate-approved training on family engagement and communication strategies.”

Seventeen state systems (n = 35%) included the QRIS indicator for specific *policies to promote health of staff*, such as family leave, sick time, and health insurance. However, only nine of those indicators clearly applied to family child care. Our codebook initially included a separate code for *activities to promote health of staff*, based on the *Caring for Our Children* standard “Health Promotion for the Staff,” which describes “activities such as health assessments, health education, help in accessing immunizations, health-related fitness activities, and time for staff to be outdoors” (American Academy of Pediatrics et al., 2019). However, our coding did not identify any QRIS indicators related to specific activities implemented by the program related to promotion of staff wellbeing and health. Though none were formally coded, we noted some examples of QRIS indicators describing less defined or structured opportunities for staff to engage in wellness activities such as the following examples from Oregon’s and Alaska’s standards, respectively:

- “Space away from children is provided for planning, administrative activities, relaxation, and personal care.” (Oregon)
- “Programs demonstrate supports for staff retention, wellness, and sustainable business practices.” (Alaska)

As these examples did not describe specific activities, space, or time for staff health education, services, or relaxation distinct from time and space for planning and work-related activities, they were not formally coded as *activities to promote health/wellbeing of staff*.

Classroom Procedures and Environment

The majority of state QRIS based indicators related to *classroom procedures and environment*, at least in part, on external rating or assessment systems, while many of the specific *Caring for Our Children* standards in this theme were rarely identified in indicators. Many QRIS included indicators on Environment Rating Scales (n=33 or 80%), and most of those applied to both centers and family child care (n=31 out of 33 or 94%). Environment Rating Scales are designed to assess quality of interactions between children and their classroom environment (Teachers College Press, 2022). Another external rating system, *Classroom Assessment Scoring System*[®] (CLASS) (Teachstone, 2022), was referenced in indicators for 18 state QRIS (44%) for assessment of classroom interactions and relationships, though only 10 of those indicators clearly applied to family child care. The majority of state initiatives that assessed classroom relationships and interactions using CLASS, also used Environment Rating Scales to assess the environment (n=16 out of 18 or 89%).

Many state QRIS included indicators describing features of the planned, daily activities or curriculum, including that they *foster developmental progress across domains* (n=32 or 78%), *are flexible to capture the interests and individual abilities of children* (n=24 or 59%), and *reflect the languages and cultures and languages of families* served by the program (n=19 or 46%). The majority of state QRIS included *staff to child ratios* in indicators (n=23 or 56%), though only 14 of those applied to both family child care and centers.

Few state QRIS included specific indicators highlighting other aspects of the classroom environment and interactions with caregivers which promote early development and mental health, such as *adults engage in frequent verbal exchanges with all children* (n=6 or 15%), *primary caregiving* (n=6 or 15%), having *developmentally appropriate discipline policies* (n=6 or 15%), and *continuity of care policy/procedure* (n=5 or 12%). The following example from Montana's rating system applied to both family child care and centers and was coded for *primary caregiving* and *continuity of care* (in addition to *staff to child ratios*): "A written staffing plan is in place assuring continuity of care (including a plan for substitute staff situations), appropriate adult to child ratios, appropriate group size, and that children are benefitting from having primary caregivers." Also, few state initiatives included indicators coded as *play is the foundation of the curriculum or activities* (n=4 or 10%). In this example from Pennsylvania's indicators, both learning through play and child development are addressed; "Lesson plans reflect a balance of activities that support developmentally appropriate learning through play." Finally, *Positive Behavioral Interventions and Support*, often referred to as the Pyramid Model in early childhood settings, (Hemmeter et al., 2016) focuses on developmentally appropriate classroom management and behavioral supports and was included as a *staff/caregiver training and support* indicator for two state QRIS.

Health Advocates and Consultants

Caring for Our Children standards in this theme were least often represented in state QRIS indicators. Ten state QRIS (24%) included an indicator on *engaging or partnering with a child care health consultant*, with minimal differences by centers or family child care standards (Fig. 1). *Caring for Our Children* defines a child care health consultant as "a licensed health professional with education and experience in child and community health and child care and preferably specialized training in child care health consultation... [who] is not acting as a primary care provider at the facility but offers critical services to the program and families by sharing health and developmental expertise, assessments of child, staff, and family health needs and community resources (American Academy of Pediatrics et al., 2019)." Across state QRIS, descriptions of the role of child care health consultants differed, from providing little or no detail to describing engagement with child care health consultants as serving a specific purpose, such as establishing and maintaining health policies, completing injury prevention checklists or safety assessments, and assisting providers in developing strategies to support children's health, development, and behavior. This range of child care health consultant role descriptions is illustrated by the following examples:

- "An IdahoSTARS' child care health consultant coaches at least once a year." (Idaho)
- "Program utilizes a licensed or certified health professional or health care consultant to establish and maintain health policies above those required by certification." (Pennsylvania)
- "When needed, the educator uses an outside consultant/mentor with expertise in children's cognitive development, behavior, and mental health to provide support and assistance in implementing strategies that support positive relationships/ interactions and prevention/ intervention techniques" (Massachusetts)

No states included QRIS indicators coded as *program has designated health advocate*. *Caring for Our Children* defines a health advocate as an “administrator or staff person... responsible for policies and day-to-day issues related to health, development, and safety of individual children, children as a group, staff, and parents/guardians. The primary contact for parents/guardians when they have health concerns, including health-related parent/guardian/staff observations, health-related information, and the provision of resources (American Academy of Pediatrics et al., 2019).”

Parent/Guardian Engagement

The majority of QRIS included indicators about *regular, planned communication with parents/guardians* (n=32 or 91%) and *program offers parent/guardian education about parenting or child development* (n=28 or 80%). Fewer states specified *regular, planned communication with parents/guardians about child’s development* (n=12 or 34%) and that there should be *opportunities for parents/guardians to observe staff facilitating child development* (n=9 or 26%). There were minimal differences between centers and family child care indicators in this theme (Fig 1). For two states, the code *opportunities for parents/guardians to observe staff facilitating child development*, was coded for centers, but not for family child care. Researchers noted that some indicators coded for *program offers parent/guardian education about parenting or child development* suggested offering parents/guardians information about accessing services or resources to help ensure that children’s needs are met, such as this example from Alaska’s QRIS: “Program provides access to supports and community resources to assist families in: meeting their child’s needs; increasing their knowledge of child development; making social connections; and helping successfully transition their child to school.”

Discussion

This project was the first, to our knowledge, to systematically review and describe rating indicators across all state-wide QRIS related to promotion of child development and mental health consistent with *Caring for Our Children*. Leaders in early childhood system building have described variability in QRIS structure and indicators across states (BUILD Initiative, 2020). This project identified differences with respect to the level of detail provided by QRIS indicators related to promoting child development and mental health and identified categories of promotion most widely employed across state QRIS indicators. Though there were differences, all statewide QRIS addressed childhood development and mental health in at least one of their rating indicators or relied on an assessment designed to be inclusive of some of these elements (e.g., Environment Rating Scales). This finding is expected as supporting child development and mental health is a recognized component of quality early care and education (American Academy of Pediatrics et al., 2019; Brooks, 2022).

Results also indicated that, in most cases, promotion of early childhood mental health and development standards through QRIS applied to both center-based ECE and family child care, which may be an important health equity consideration (BUILD Initiative & QRIS National Learning Network, 2019 ; Jiashan & Natzke, 2021; Meek, 2020; NASEM, 2019b). However, when ECE type was specified a greater proportion of QRIS indicators applied to

center-based ECE compared to family child care across all categories of promotion except for *health advocates and consultants*, for which nearly all indicators applied to both settings. Given that not all coded indicators applied to both center-based ECE and family child care, this study suggests an important opportunity for QRIS to ensure equitable support for high quality ECE, particularly promotion of child development and mental health, across ECE program settings. Differential use of indicators by program setting may warrant further inquiry as a possible factor in attenuated associations between QRIS ratings and quality improvement among family child care compared to center-based programs (Yazejian & Iruka, 2015; Zellman & Karoly, 2015). While results did not point to other clear patterns in the application of indicators across ECE settings, differential application of indicators may be warranted, in some cases, to address variation in state licensing requirements or to accommodate unique needs of family child care and center-based programs. For example, guidance on staff to child ratios, which we found to be included in fewer indicators for family child care compared to center-based ECE, are likely specified in licensing requirements for family child care in many states; *policies to support well-being of staff*, also observed less often in indicators for family child care, may be less relevant in ECE settings with a smaller number of caregivers who may have more control over their work schedules and wellbeing practices.

QRIS indicators related to the themes of *classroom procedures and environment, staff/caregiver training and support, parent/guardian engagement, and developmental monitoring, screening, and referral* were frequently included in these state systems. Many QRIS referred to professional development plans or initiatives described elsewhere instead of defining aspects and topics of professional development in the QRIS ratings, which may be related to requirements for states to have well-defined professional development frameworks (Administration for Children and Families, 2022). Such plans or initiatives are likely to cover topics related to child development; however, that inquiry was beyond the scope of this analysis. Still, half of the systems included training in child development and/or included the CDA credential in a rating indicator, recognizing the importance of child development expertise for early childhood educators. Similarly, the majority of state QRIS based their rating indicators related to classroom environment, at least partially, on Environment Rating Scales or other assessments and may not have defined aspects of classroom environment in the rating indicators themselves. These external assessment systems employed by many QRIS likely include standards related to our codes for the theme *Classroom Procedures and Environment*.

The majority of QRIS reviewed in this project included at least one indicator on developmental monitoring and screening, though fewer included indicators on use of valid screening tools, referral based on concerns identified through monitoring or screening, or the involvement of parents and other types of early childhood or healthcare providers in these processes. Surveys of early childhood educators have shown that developmental monitoring is a common practice, though often for the purpose of informing instruction as opposed to detecting developmental delays, and that developmental screening is viewed as a part of the early childhood educator role (Boh & Johnson, 2018; Chödrön et al., 2021). Coordination with healthcare providers to support and monitor child development can support ECE engagement as a key member of integrated care teams, an important strategy

for supporting early childhood mental health and development (Buka et al., 2022; Lipkin et al., 2020). Inclusion of specific *Caring for Our Children* guidance in QRIS indicators may help support more comprehensive approaches to developmental monitoring and screening, including coordination with healthcare providers, across ECE systems.

Other elements of *Caring for Our Children* standards were less commonly represented by QRIS indicators. These elements may represent opportunities for QRIS leaders to consider whether they warrant inclusion in future updates or might be addressed through another initiative. For example, most QRIS included *regular, planned communication with parents/guardians* in their rating indicators, but fewer specified that child development should be a topic during those regular engagements. Also, standards on staff wellness and health promotion policies for both centers and family child care could be beneficial to address through QRIS indicators in light of known health disparities in the ECE workforce (Linnan et al., 2017) and workforce challenges related to the COVID-19 pandemic (Administration for Children and Families, 2021; Quinn et al., 2022). It is also noteworthy that only six state QRIS were identified as describing developmentally appropriate discipline policies in indicators. Implementation of such policies and procedures could have important health equity implications by deterring exclusionary discipline practices such as expulsion and suspension, which disproportionately impact Black/African American, Hispanic/Latino, and American Indian or Alaska Native children and those with disabilities (Meek, 2020; NASEM, 2019b; U.S. Department of Education Office for Civil Rights, 2016).

Few states included rating indicators on child care health consultants and none referred to designation of health advocates. However, it was noted that some state QRIS offered health consultation to participating sites and may have excluded child care health consultants from the quality rating indicators for this reason. The child care health consultant role can be important for advancing health and safety practices and linking families to support and resources (National Center on Early Childhood Quality Assurance, 2021) and engagement with Early Childhood Mental Health Consultants, specifically, has been associated with lower hyperactivity and behavior problems among other positive child outcomes (Gilliam et al., 2016). Furthermore, designation and training of ECE program staff as health advocates can equip them with the knowledge and direction to monitor, promote, and respond to children's health and safety in a myriad of ways, including through record-keeping and review of health records, understanding and addressing behavior or mental health needs, identifying and sharing resources for parents related to accessing health services and referrals, promotion of developmentally appropriate activities and environments, and engagement with child care health consultants (American Academy of Pediatrics et al., 2019).

Strengths and Limitations

Findings of this study provide state and local leaders with information about how states have integrated evidence-informed standards for promotion of child development and mental health in QRIS indicators and highlight opportunities for further integration and research. These in-depth findings are a helpful companion to the snapshot of indicators available in the Quality Compendium. Findings also provide information on indicators

for both center-based ECE and family child care (BUILD Initiative & QRIS National Learning Network, 2019 ; Meek, 2020; NASEM, 2019b). This study included all statewide QRIS indicators in place at the time the document searches were conducted (March and April of 2020), including California's universal regional indicators. Our qualitative content methodology featured independent coding of the QRIS indicators and identification and resolution of coding differences by multiple independent researchers in order to enhance dependability and reduce subjective bias (Hsieh & Shannon, 2005; Ulin et al., 2005). Furthermore, calculations of inter-rater reliability indicated over 80% coding agreement among researchers, suggesting that the results are reliable and accurate (McHugh, 2012).

There are several limitations to note about this analysis. First, the codebook developed for this study may not be inclusive of all qualities of ECE environments and practices promotive of early childhood development and mental health. Given resource and feasibility limitations as well as the intended scope of this project, the research team had to be judicious while selecting relevant *Caring for Our Children* standards for inclusion in the codebook. Care was taken to identify the most salient *Caring for Our Children* standards for inclusion, and external subject-matter experts were consulted and invited to review those selected, in part, to address any potential bias on behalf of the research team during code development. Furthermore, *Caring for Our Children* standards are based, in part, on a limited body of peer reviewed scientific research in the ECE field demonstrating significant associations between ECE quality standards and desirable child outcomes (American Academy of Pediatrics et al., 2019; Soliday Hong et al., 2019). Therefore, there may be aspects of quality ECE that have not yet been identified for inclusion in *Caring for Our Children* standards, and additional research may be needed to support and enhance implementation of existing standards (Soliday Hong et al., 2019).

Second, the team made efforts to thoroughly search state QRIS websites and directly contacted programs when rating criteria were not available through the Quality Compendium or on public websites. Still, it is possible that additional information on rating criteria could have been updated elsewhere prior to the period of data collection and/or could have appeared in appendices or documents that were not included with the documents accessible to the study team. It is also important to note that coding and analysis was restricted to the indicators that were used to provide a score to determine QRIS ratings as this was an exploration of how specific child development and mental health standards are included in quality indicators. *Caring for Our Children* standards identified less frequently in QRIS indicators, such as health advocates and specific guidance for developmental monitoring and screening practices, may instead be supported in some states through QRIS guidance outside of the quality indicators assessed for this study. Content relevant to the standards coded for this project could have been present in introductory statements, descriptions of coaching available to participants or other initiatives described in the QRIS documentation. For example, given that health consultation services were described in some states' QRIS documentation external to quality indicators, other relevant *Caring for Our Children* standards may also be represented elsewhere in QRIS guidance. Further, inclusion of *Caring for Our Children* standards in QRIS guidance (i.e., quality indicators and other documentation) does not necessarily translate to consistent or appropriate implementation by participating ECE programs in practice (Tout, 2017).

Finally, this analysis is not meant to be interpreted as a reflection of other strategies outside of QRIS that might be in place to address *Caring for Our Children* standards. There are many strategies outside of QRIS including licensing, technical assistance programs, and other initiatives a state may employ to address child development and mental health standards (BUILD Initiative, 2020). It may be the case that state systems rely on technical assistance programs or other supports to ensure these components are in place. In 2021, nearly half of states reporting information to the QRIS Quality Compendium included licensing as the first step or lowest rating level in their QRIS (Quality Compendium, 2022a). Since we did not review licensing information, we cannot ascertain whether there are child development and mental health related standards in the first rating levels for those states. The purpose of licensing is to ensure basic protections for children in care, though many states use *Caring for Our Children* as a resource for developing rules and regulations for licensing (Quality Compendium, 2020). We also did not code and analyze state professional development system criteria that was not available in QRIS indicators. Similarly, we did not code and analyze the criteria in Environment Rating Scales, CLASS, or other classroom environmental assessments that many QRIS were using as the basis for ratings. Therefore, we cannot conclude from this analysis how state systems that relied on these assessments have addressed child development and mental health promotion standards in their QRIS rating criteria.

Additionally, our analysis identified 41 states with active QRIS as of March 24th through April 13th, 2020, based on the Quality Compendium, leaving 10 additional states that we did not investigate for QRIS implementation. As of December 2022, QRIS implementation varied across these states with two having QRIS in place (Alabama and Colorado), three working to develop QRIS (Kansas, West Virginia, and Wyoming), one using CLASS observations to evaluate classrooms (Florida), and three in development of quality improvement systems (Hawaii, Missouri, and South Dakota) (Quality Compendium, 2022b). Meanwhile, one state included in our analysis no longer has an active QRIS in place (Mississippi) (Quality Compendium, 2022b). Ongoing efforts to monitor and assess QRIS quality indicators and implementation structures may identify additional opportunities to integrate evidence-informed child development and mental health promotion standards.

Implications

Early childhood system and program leaders can use these findings to inform future QRIS and quality improvement work in their states or localities. Child development and mental health standards reflect essential components of quality ECE (American Academy of Pediatrics et al., 2019) and quality ECE is an important health equity strategy for reducing disparities (NASEM, 2019a). Information on how states have developed language for rating criteria on these standards can be helpful for updates or revisions to QRIS indicators or other quality initiatives. Furthermore, this work may inform efforts to assess or promote integration of evidence-informed standards in ECE quality initiatives beyond the U.S. context. For the child development and mental health related standards that fewer states included in their ratings, such as health consultants or advocates, leaders could consider whether to include these standards in future iterations of QRIS or whether other state initiatives, licensing, or other efforts adequately address these *Caring for Our*

Children standard elements. Furthermore, future studies could examine the inclusion of these child development and mental health standards in licensing regulations, to understand the extent to which these standards may be a part of the foundational or first rating level of some QRIS and to examine potential variability in state approaches to these standards through licensing. Similar review of quality indicators within other common ECE quality assessments and initiatives, such as CLASS and Environment Rating Scales, could enhance understanding of their role in supporting early childhood development and mental health in ECE systems. Future research could also explore how different state ECE professional development systems address these child development and mental health standards to provide state leaders with more information to assist with planning and early childhood system development.

Additionally, researchers noted that some indicators coded for *program offers parent/guardian education about parenting or child development* included guidance for ECE programs related to offering parents/guardians information about accessing services or resources to help meet children's basic needs, such as through social services, primary healthcare, and/or parent/guardian social support (see Table 1 examples). The guidance provided by these QRIS indicators is in alignment with a recent call to action from the Center for the Developing Child at Harvard University to expand the focus of the early childhood field toward addressing inequities which place disproportionate burdens on families with young children (Shonkoff, 2022). Such guidance also supports a preventive, integrated model of care by addressing contextual and multi-generational challenges which can impact early childhood mental health (Buka et al., 2022). As it was not systematically assessed or documented as part of our study, future inquiry may more directly assess the extent to which QRIS supports this recommendation to address structural, social, and family-level determinants of child mental health and development and underlying inequities. Future research could also examine the extent to which child development and mental health are promoted equitably through QRIS and to identify opportunities to ensure that QRIS guidance and resources are reaching ECE programs and communities with the greatest need (Jenkins et al., 2021; Meek, 2020). While expanding access to quality ECE is widely considered a promising strategy for promoting children's mental and physical health equity on a population level (OSG, 2021) and QRIS has been suggested as a possible lever for doing so (NASEM, 2019b), potential barriers to equity in QRIS have been suggested (Jenkins et al., 2021; NASEM, 2019b). A recent study employed a nationally-representative sample of child care centers to identify characteristics of those engaged in QRIS and found that only 1/3 of child care centers participated in QRIS and that lower QRIS engagement was more likely among child care centers located in communities with larger proportions of Black residents, compared to those located in communities with low to moderate proportions of Black residents (Jenkins et al., 2021). Without equitably engaging ECE programs across diverse communities, QRIS may contribute to widening racial/ethnic disparities in access to high-quality ECE and associated positive health and developmental outcomes which extend beyond early childhood (BUILD Initiative, 2020; BUILD Initiative & QRIS National Learning Network, 2019; Jenkins et al., 2021; Jiashan & Natzke, 2021; Meek, 2020; NASEM, 2019b).

While our findings suggest that the majority of QRIS indicators relevant to child development and mental health were employed by QRIS as rating criteria for both FCCs and centers, an important factor for achieving equitable reach of the guidance (BUILD Initiative & QRIS National Learning Network, 2019 ; Jiashan & Natzke, 2021; NASEM, 2019b), future research may investigate and describe FCC participation in QRIS, as has recently been done for center-based programs (Jenkins et al., 2021). Furthermore, future research may elucidate opportunities for QRIS to enhance equitable access to quality ECE through other avenues, such as inclusion of ECE equity indicators, assessment of cultural relevance of indicators used to define ECE quality, restructuring of quality ECE systems away from rating-based systems, and directing funding resources toward supporting and training a diverse and culturally responsive early childhood workforce (Curenton et al., 2020; Jenkins et al., 2021; Meek, 2020; NASEM, 2019b).

Finally, states may consider equity implications for comprehensively embedding CFOC child development and mental health promotion standards in QRIS indicators and other measures of quality for ECE systems. For example, highly prescriptive definitions of quality across diverse communities may generate disproportionate barriers for some providers, which could lead to inequitable distribution of incentives, recognition, and support (Meek, 2020; Yazejian & Iruka, 2015). While lower quality ECE programs may be more likely to be located in communities with higher concentrated disadvantage, resource-related barriers to obtaining high quality ratings, such as lack of local referral networks to address indicated developmental delays, or limited funds for staff professional development, may exacerbate disparities (Hatfield et al., 2015). Barriers to achieving high quality ratings may also emerge if quality guidance is inflexible to accommodate cultural norms or practices (Meek, 2020). Meaningfully integrating equity considerations in all efforts to define and guide quality at the state level may help ensure that such efforts support, not hinder, availability of high quality ECE, particularly in communities that need it the most.

Conclusion

Evidence-informed *Caring for Our Children* child development and mental health standards are commonly included in QRIS rating criteria in statewide systems, though which standards and the level of detail included from *Caring for Our Children* vary. Inclusion of standards related to health consultants and advocates, parent engagement on child development and developmental monitoring and screening, referrals for developmental concerns, and activities to support staff wellness and health promotion may be opportunities for state QRIS to further integrate promotion of early childhood development and mental health into ECE quality standards. Findings point to QRIS indicators as a potential opportunity for promotion of evidence-informed early childhood development and mental health quality standards in ECE systems.

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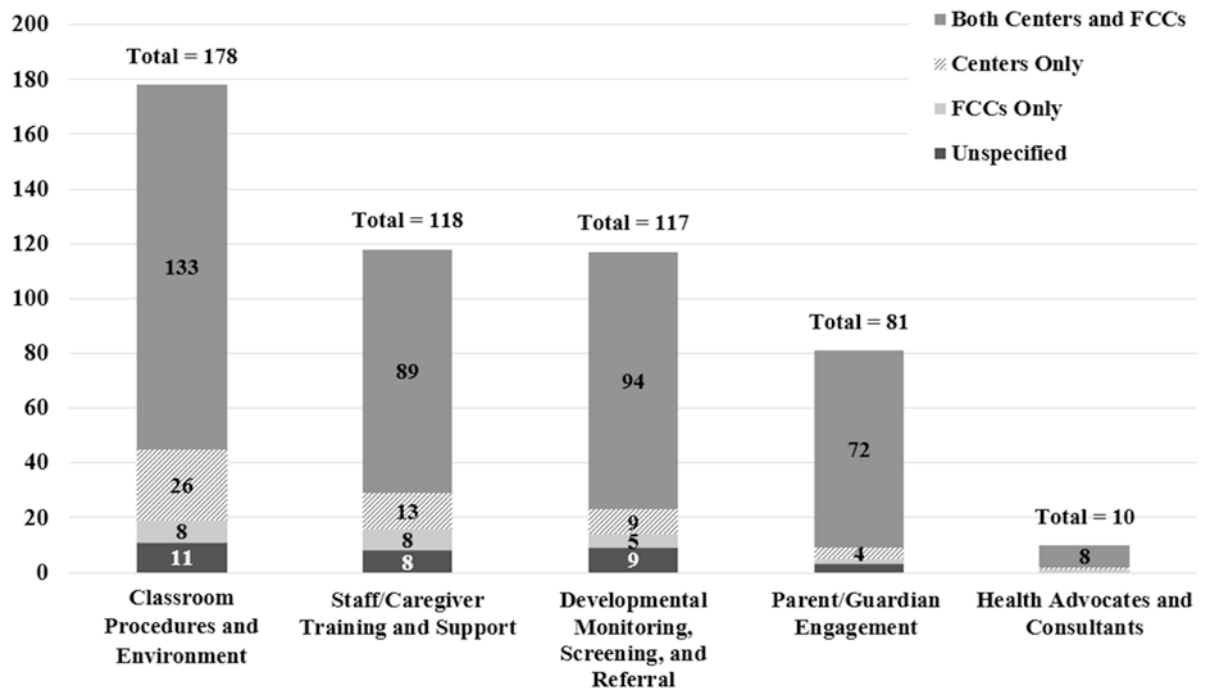


Fig. 1. Counts of Coded QRIS Indicators (N = 504) by Category of Child Development or Mental Health Promotion: Totals and Stratified by ECE Setting

Note: QRIS= quality rating and improvement systems; ECE = early care and education; FCC = family child care; Indicators coded in the category of *parent/guardian engagement*: Centers Only = 4, FCCs Only = 2, Unspecified = 3; Indicators coded in the category of *health advocates or consultants*: Centers Only = 1, FCCs Only = 1

Table 1 Selected Caring for Our Children Standards (2019) and Examples of Corresponding QRIS Indicators Implemented by States – March/April 2020

Coding theme:	Summary of Caring for Our Children standard (code):	State QRIS indicator example:
<i>Developmental monitoring, screening, and referral</i>	Caregivers/teachers monitor children’s development	Michigan: “A process for observing each child’s health and development on a daily basis and communicating observations to the child’s family, other provider/educators, and to specialized staff, with recommendations for family to seek medical opinions as necessary.”
	<i>Developmental screening includes parent/guardian consent</i>	Illinois: “parent-signed permission forms to conduct screening”
	<i>Program utilizes validated developmental screening tool</i>	New York: “Program uses a developmental screening tool that is valid and reliable”
	<i>Caregivers/teachers share results of developmental screening or monitoring with parents/guardians</i>	New Mexico: “Results of the developmental screening have been shared with the family.”
	<i>Caregivers/teachers gather input from parents/guardians to monitor children’s development</i>	Arizona: “Assessment of children’s growth and development includes gathering and documenting information received from families either from child information surveys, daily communications with families, or formal conferences held with the families”
	<i>Caregivers/teachers gather input on child’s development from healthcare providers, consultants, and/or other staff who know the child</i>	No examples identified; no QRIS indicators were coded for this Caring for Our Children standard
	<i>If screening results in concern, child referred to their primary care provider (medical home) or to an appropriate specialist or clinic for further evaluation</i>	California: “Program staff uses children’s screening results to make referrals and implement intervention strategies and adaptations as appropriate”
	<i>Caregivers/teachers provide child development resource information to parents as needed</i>	Washington: “Program shares information with families about how to find developmental services when needed (e.g., policy in place to connect families with Child Find)”
<i>Staff/caregiver training and support</i>	<i>Caregivers/teachers complete continuing education training and/or orientation on child development</i>	New York: “All teaching staff/provider and any regular assistants receives annual training in child observation and assessment that include recognition of developmental milestones and identifying possible developmental delays and linking child observation and assessment to curriculum implementation.”
	<i>Continuing education training/orientation covers relationships with families</i>	Kentucky: “Program/Site administrator and 75% of staff complete professional learning activities related to strengthening family engagement.”
	<i>Pre-service and/or continuing education training required but defined elsewhere^a</i>	Virginia: “Complete the Virginia Quality Professional Development Series (through online modules or by attending in-person trainings)”
	<i>Caregivers/teachers have Child Development Associate Credential (CDA)^a</i>	Washington: “Center- Designated Lead Teaching Staff: 25% have CDA or approved certificate or credential. All Other Teaching Staff (assistants and Aids): 25% have CDA or approved certificate or credential; Family Childcare- Projected Point Total CDA or approved certificate or credential”
	<i>Strengthening Families: A Protective Factors Framework^a</i>	Massachusetts: “Program completes Strengthening Families Self-Assessment and uses data to engage in continuous improvement”
	<i>Policies to promote health of staff</i>	Massachusetts: “Program offers a benefit package that includes vacation, sick time, and health insurance.”

Coding theme:	Summary of Caring for Our Children standard (code):	State QRIS indicator example:
<i>Classroom procedures and environment</i>	<p><i>Planned daily activities or curriculum foster developmental progress across domains</i></p> <p><i>Play is the foundation of the curriculum</i></p> <p><i>The curriculum or daily activities reflect the cultures and languages of families</i></p> <p><i>The curriculum or daily activities are flexible to capture the interests and individual abilities of children</i></p> <p><i>Adults engage in frequent verbal exchanges with all children</i></p> <p><i>Primary caregiving: children form relationships with limited number of teachers/caregivers</i></p> <p><i>Continuity of care policy/procedure</i></p> <p><i>Developmentally appropriate discipline policy</i></p> <p><i>Staff to child ratios^b</i></p> <p><i>Classroom interactions and relationships assessed using CLASS^a</i></p> <p><i>Classroom environment and interactions defined by ERS^a</i></p> <p><i>PBIS training^a</i></p> <p><i>Health advocates and consultants</i></p>	<p>Delaware: "Program implements a written comprehensive curriculum that is aligned with the Delaware Early Learning Foundations for infants, toddlers, and preschoolers enrolled... Lesson plans that include activities in all areas of learning including social, emotional, physical, language and cognitive domains."</p> <p>Minnesota: "Play and interactions. Program implements learning experiences that provide purposeful play, peer and adult interaction, exploration, and skill development."</p> <p>Nebraska: "The program honors the child's home language and encourages home language development by greeting children who are English Language Learners (ELL) and their families in the home language or using simple phrases from a child's home language in daily communication with the child. All children need to see themselves represented in the classroom on a daily basis. This includes each child's cultural identity and traditions."</p> <p>Indiana: "Daily schedule provides ample time for child-directed choices with activities and materials that are geared to the age, interests, and abilities of each child."</p> <p>Indiana: "Teachers/Caregivers communicate with and listen to children (verbal and non-verbal messages) with lots of one-on-one attention throughout the day and usually at eye-level, including time when the teacher is down on the floor with the children."</p> <p>Oregon: "Children spend a majority of their day with a consistent care provider."</p> <p>Delaware: "Program minimizes transitions for children throughout the program year."</p> <p>Maryland: "Staff uses positive behavioral supports and strategies with children that include providing choices and using redirection. Written policy for positive behavioral practices (Discipline Policy)"</p> <p>Iowa: "No more than two children under age 2 are in care at any one time and no more than six children total are in care at any one time, including the provider's own children under school age"</p> <p>Nebraska: "Classroom Assessment Scoring System (CLASS), InfantCLASS, ToddlerCLASS, Prekindergarten (Pre-K) CLASS items are scored on a 1-7 continuum with 6-7 considered high, 3-5 medium, and 1-2 low. For center-based programs, at least 30 percent of groups/classrooms of children will be randomly selected for observation. This will include at least one group/classroom per age group."</p> <p>Maryland: "Self-assessment conducted using ERS or CLASS for at least one classroom from each age group as defined by the scales."</p> <p>Wisconsin: "Provider has completed any one of the following six options: credits of inclusion and/or social-emotional training; Wisconsin Pyramid Model for Social and Emotional Competence Module Training (24 hours); Positive Behavioral Intervention and Supports (PBIS) (15 hrs.)"</p> <p>Pennsylvania: "Program utilizes a licensed or certified health professional or health care consultant to establish and maintain health policies above those required by certification."</p> <p><i>No examples identified; no QRIS indicators were coded for this Caring for Our Children standard</i></p> <p>Maine: "Parents are offered at least 2 parent conferences a year to discuss the child's progress, behavior, social and physical needs"</p> <p>Delaware: "Planned conferences occur at least twice a year or approximately every six months. From the program's perspective, the conversation includes a thoughtful discussion about the child's growth and</p>

Coding theme:	Summary of Caring for Our Children standard (code):	State QRIS indicator example:
	<p><i>Opportunities for parents/guardians to observe staff facilitating child development</i></p> <p><i>Program offers parent/guardian education about parenting or child development</i></p>	<p>development, progress towards current learning goals and identification of new goals, and insight into the child's classroom experiences.^a</p> <p>Massachusetts: "Families are encouraged to: volunteer in the program, to assist in the classroom, and share cultural and language traditions or other interests such as their jobs, hobbies, and other relevant information"</p> <p>Ohio: "Program organizes at least one educational training, workshop or event to support families' engagement in children's learning and development"</p>

Notes: QRIS = quality rating and improvement system; CLASS = Classroom Assessment Scoring System[®] (Teachstone, 2022); ERS= Environment Rating Scales (Teachers College Press, 2022); PBIS: Positive Behavior Interventions and Support (Center on PBIS, 2022)

^aInductive code (not directly derived from CFOC standard)

^bGiven that the criteria in the CFOC standard definition could be fully or partially met for an indicator to be coded, we accepted any mention of ratios (or class size for FCCs) by a QRIS indicator for it to be coded as *staff to child ratio*

Table 2

State QRIS with At Least One Indicator That Fully or Partially Aligns with Each Caring for Our Children Standard (2019), Totals and Counts Stratified by Program Type – March/April 2020

Coding theme and summary of Caring for Our Children standard (code)	State QRIS	Total (N= 41)	Centers & family child care	Centers only	Family child care only	Unspecified
<i>Theme: Developmental monitoring, screening, and referral (n = 34)</i>						
<i>Caregivers/teachers monitor children's development</i>	AK, AR, AZ, CA, CO, DE, GA, ID, IL, IN, MA, MD, ME, MI, MN, ND, NE, NJ, NM, NV, NY, OH, OR, PA, RI, SC, TN, UT, VT, WA, WI	31	29	1	0	1
<i>Developmental screening includes parent/guardian consent or participation</i>	CA, IL, WA	3	2	0	1	0
<i>Programs utilize validated developmental screening tool</i>	AK, CA, CO, DE, IL, KY, MA, MD, MI, MT, NE, NJ, NM, NV, NY, OH, OR, PA, RI, SC, UT, WA, WI	23	18	2	1	2
<i>Caregivers/teachers share results of developmental screening or monitoring with parents/guardians</i>	CO, DE, IL, KY, MA, MD, MI, MN, NE, NJ, NM, NY, OH, PA, SC, TX, WA	17	14	1	0	2
<i>Caregivers/teachers gather input on development from healthcare providers, consultants and/or other staff who know the child</i>	No QRIS indicators were coded for this CFOC standard	0	0	0	0	0
<i>Caregivers/teachers gather input from parents/guardians to monitor children's development</i>	AZ, MA, ME, MN, OR, RI, SC, WA	8	7	0	0	1
<i>If screening results in concern, child referred to their primary care provider (medical home) or to an appropriate specialist or clinic for further evaluation</i>	AR, AZ, CA, CO, DE, IL, KY, MA, MD, MI, NE, NJ, NM, NV, OH, OK, OR, PA, SC, TX, WI	21	14	3	2	2
<i>Caregivers/teachers provide child development resource information to parents as needed</i>	AK, CO, IL, MA, MD, MI, MT, NE, NM, NV, RI, SC, UT, WA	14	10	2	1	1
<i>Theme: Staff/caregiver training and support (n = 39)</i>						
<i>Caregivers/teachers complete continuing education training and/or orientation on child development</i>	AK, AR, AZ, CA, GA, KY, MI, MN, MT, NC, NH, NJ, NM, NV, NY, OH, OK, PA, SC, TN, TX, VT	22	18	1	1	2
<i>Continuing education training/orientation covers relationships with families</i>	AR, GA, IL, KY, MI, MN, NM, PA, VA	9	6	0	2	1
<i>Pre-service and/or continuing education training required but defined elsewhere^a</i>	AK, AR, AZ, CO, DE, GA, IA, ID, IL, IN, KY, MA, MD, ME, MI, MN, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, TN, UT, VA, VT, WA, WI	37	29	3	3	2
<i>Caregivers/teachers have Child Development Associate Credential (CDA)^a</i>	AZ, DE, IA, IN, MA, ME, MI, NE, NJ, NY, OH, OK, PA, RI, SC, TN, TX, VA, VT, WA, WI	21	16	2	2	1
<i>Strengthening Families: A Protective Factors Framework^a</i>	AK, AR, GA, ID, MA, NH, NJ, PA, SC, VT, WA, WI	12	11	0	0	1

Coding theme and summary of Caring for Our Children standard (code)	State QRIS	Total (N= 41)	Centers & family child care	Centers only	Family child care only	Unspecified
<i>Policies to promote health of staff</i>	CO, DE, KY, MA, MD, ME, MI, NH, NJ, NV, NY, OH, OR, PA, TN, VT, WI	17	9	7	0	1
Theme: <i>Classroom procedures and environment (n = 41)</i>						
<i>Planned daily activities or curriculum foster developmental progress across domains</i>	AK, AR, AZ, CO, DE, GA, ID, IL, IN, KY, MA, MD, ME, MI, MN, MT, ND, NE, NH, NJ, NV, NY, OH, OK, OR, PA, RI, SC, TX, VA, WA, WI	32	28	2	0	2
<i>Play is the foundation of the curriculum</i>	AR, MN, OK, PA	4	4	0	0	0
<i>The curriculum or daily activities reflect the cultures and languages of families</i>	AK, CO, GA, IL, IN, MA, MD, MI, NE, NJ, MN, NM, NV, NY, OR, PA, SC, TX, UT	19	16	1	1	1
<i>The curriculum or daily activities are flexible to capture the interests and individual abilities of children</i>	AZ, CO, DE, GA, IN, KY, MA, MD, ME, MI, MN, MT, NE, NJ, NM, NV, NY, OH, OR, PA, SC, VT, WA, WI	24	18	1	3	2
<i>Adults engage in frequent verbal exchanges with all children</i>	IN, MA, NM, OR, SC, TX	6	4	1	0	1
<i>Primary caregiving: children form relationships with limited number of teachers/caregivers</i>	DE, ME, MT, NY, OR, SC	6	1	2	2	1
<i>Continuity of care policy/procedure</i>	DE, MI, MT, NY, PA	5	2	3	0	0
<i>Developmentally appropriate discipline policy</i>	IN, MD, OR, PA, SC, TX	6	4	1	0	1
<i>Staff to child ratios</i>	AZ, CA, DE, GA, IA, ID, IL, NM, OH, RI, SC, TX, UT, AK, CO, KY, MI, MT, NC, NV, OR, TN, WI	23	14	6	1	2
<i>Classroom interactions and relationships assessed using CLASS^a</i>	AK, AZ, CA, CO, DC, IL, LA, MA, MD, MN, ND, NE, NJ, PA, RI, VA, VT, WA	18	10	8	0	0
<i>Classroom environment defined by ERS^a</i>	AK, AR, AZ, CA, DC, DE, GA, IA, ID, IL, KY, MA, MD, MN, MT, NC, ND, NE, NH, NJ, NV, NY, OH, OK, OR, PA, RI, TN, UT, VA, VT, WA, WI	33	31	1	0	1
<i>PBIS training^a</i>	IA, WI	2	1	0	1	0
Theme: <i>Health advocates and consultants (n = 10)</i>						
<i>Program engages/partners with a child care health consultant</i>	AK, CO, IA, ID, IL, MA, NV, OR, PA, VT	10	8	1	1	0
<i>Program has designated health advocate</i>	No QRIS indicators were coded for this CFOC standard	0	0	0	0	0
Theme: <i>Parent/guardian engagement (n = 35)</i>						
<i>Regular, planned communication with parents/guardians</i>	AK, AZ, CO, DE, GA, IA, ID, IL, IN, KY, MA, MD, ME, MI, MN, MT, NH, NJ, NM, NV, NY, OH, OK, PA, RI, SC, TN, TX, UT, VT, WA, WI	32	30	0	0	2
<i>Regular, planned communication with parents/guardians about child's development</i>	DE, ME, MI, MN, NE, NJ, NM, NY, OR, TN, TX, UT	12	10	1	1	0

Coding theme and summary of <i>Caring for Our Children</i> standard (code)	State QRIS	Total (N= 41)	Centers & family child care	Centers only	Family child care only	Unspecified
<i>Opportunities for parents/guardians to observe staff facilitating child development</i>	MA, ME, MI, NH, NM, OK, OR, TN, TX	9	7	2	0	0
<i>Program offers parent/guardian education about parenting or child development</i>	AK, AR, CO, DE, GA, ID, IL, KY, MA, ME, MI, MN, MT, NE, NJ, NV, NY, OH, OK, OR, PA, RI, TN, TX, UT, VT, WA, WI	28	25	1	1	1

Notes: QRIS= quality rating and improvement systems; CLASS= *Classroom Assessment Scoring System*[®] (Teachstone, 2022); ERS= Environment Rating Scales (Teachers College Press, 2022); PBIS: Positive Behavior Interventions and Support (Center on PBIS, 2022)

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