



# Quality Early Education and Child Care From Birth to Kindergarten

Elaine A. Donoghue, MD, FAAP, COUNCIL ON EARLY CHILDHOOD

High-quality early education and child care for young children improves physical and cognitive outcomes for the children and can result in enhanced school readiness. Preschool education can be viewed as an investment (especially for at-risk children), and studies show a positive return on that investment. Barriers to high-quality early childhood education include inadequate funding and staff education as well as variable regulation and enforcement. Steps that have been taken to improve the quality of early education and child care include creating multidisciplinary, evidence-based child care practice standards; establishing state quality rating and improvement systems; improving federal and state regulations; providing child care health consultation; as well as initiating other innovative partnerships. Pediatricians have a role in promoting quality early education and child care for all children not only in the medical home but also at the community, state, and national levels.

## QUALITY MATTERS

Children's early experiences are all educational, whether they are at home, with extended family and friends, or in early education and child care settings. Those educational experiences can be positive or negative. At present, more than half of children less than 5 years old regularly attend some type of out-of-home child care or early childhood program,<sup>1</sup> and their experiences in these settings will affect their future lives.<sup>1</sup> The arrangements families make for their children can vary dramatically, including care by parents and relatives, center-based child care, family child care provided in a caregiver's home, care provided in a child's own home by nannies or baby-sitters, or a combination of these types of care.<sup>1-3</sup> How a family chooses this care is influenced by family values, affordability, and availability.<sup>2,4</sup> For many families, high-quality child care is not available or affordable.<sup>2,4</sup> This policy statement outlines the importance of quality child care and what pediatricians can do to help children get care in high-quality early childhood education (ECE) settings.

## abstract

*Department of Pediatrics, Lehigh Valley Health Network, Allentown, Pennsylvania, and Department of Pediatrics, University of South Florida, Morsani College of Medicine, Tampa, Florida*

*Dr Donoghue updated the previous policy statement and revised that original document by adding references, updating the wording, and adding new sections based on updates from the field. The document went through several layers of review, and Dr Donoghue was responsible for responding to those comments.*

*This document is copyrighted and is property of the American Academy of Pediatrics and its Board of Directors. All authors have filed conflict of interest statements with the American Academy of Pediatrics. Any conflicts have been resolved through a process approved by the Board of Directors. The American Academy of Pediatrics has neither solicited nor accepted any commercial involvement in the development of the content of this publication.*

*Policy statements from the American Academy of Pediatrics benefit from expertise and resources of liaisons and internal (AAP) and external reviewers. However, policy statements from the American Academy of Pediatrics may not reflect the views of the liaisons or the organizations or government agencies that they represent.*

*The guidance in this statement does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.*

*All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.*

**DOI:** <https://doi.org/10.1542/peds.2017-1488>

Address correspondence to Elaine A. Donoghue, MD, FAAP. E-mail: [elaine\\_a.donoghue@lvhn.org](mailto:elaine_a.donoghue@lvhn.org)

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2017 by the American Academy of Pediatrics

**To cite:** Donoghue EA and AAP COUNCIL ON EARLY CHILDHOOD. Quality Early Education and Child Care From Birth to Kindergarten. *Pediatrics*. 2017;140(2):e20171488

When care is consistent, developmentally appropriate, and emotionally supportive, and the environment is healthy and safe, there is a positive effect on children and their families.<sup>5-14</sup> Children who are exposed to poor-quality environments (whether at home or outside the home) are more likely to have unmet socioemotional needs and be less prepared for school demands.<sup>5-14</sup> Behavioral problems in ECE can lead to preschool expulsion with cascading negative consequences. Each year, 5000 children are expelled from ECE settings, which is a rate 3 times higher than that of their school-aged counterparts.<sup>15</sup> When behavioral health consultation is available to preschool teachers, the rate of reported expulsions is half that of the control population.<sup>15,16</sup>

Early education does not exist in a silo; learning begins at birth and occurs in all environments. Early brain and child development research unequivocally demonstrates that human development is powerfully affected by contextual surroundings and experiences.<sup>17-19</sup> A child's day-to-day experiences affect the structural and functional development of his or her brain, including his or her intelligence and personality.<sup>17-19</sup> Children begin to learn to regulate their emotions, solve problems, express their feelings, and organize their experiences at an early age and then use those skills when they arrive at school.<sup>19</sup> The American Academy of Pediatrics (AAP) has recognized the importance of early brain and child development by making it a strategic priority.

Research of high-quality, intensive ECE programs for low-income children confirm lasting positive effects such as improved cognitive and social abilities (including better math and language skills than control groups).<sup>5-14</sup> The indicators of high-quality ECE have been studied and are summarized in Table 1.

**TABLE 1** Domains of Health and Safety Quality in ECE

Domains of Health/Safety in ECE	Specific Areas of Health Safety in ECE
Immunization	Staff Children
Infection control	Hand washing with soap and running water after diapering, before handling food, and when contaminated by body fluids Children wash hands after toileting and before eating Routinely cleaned facilities, toys, and equipment
Nutrition	Safe food storage Sanitary food preparation Healthy meals and snacks Monitoring choking hazards
Environment	Clean air Integrated pest control Smoke-free environments
Oral health	Teeth brushing
Physical activity	Active play Limited screen time
Staff ratios and supervision	Small group sizes High staff-to-child ratios <sup>a</sup>
Staff qualifications	Consistent caregiving College degrees in ECE Child development associate's credential Ongoing in-service training Low turnover rate Strong background checks
Policies for children with special health care needs	Medication administration Child care health consultation Care plans completed at the medical home
Emergency procedures	Cardiopulmonary resuscitation and first aid training Written policies Disaster planning procedures All staff and children familiar with procedures Up-to-date parent contact lists
Injury prevention	Play equipment safe, including proper shock-absorbing materials under climbing toys Safe sleep practices (especially for infants) Developmentally appropriate toys and equipment Toxins out of reach Safe administration of medicines Child abuse prevention training Policies on discipline and restraint Sunscreen and insect repellent use policies Water play safety Facility safety (fire and carbon monoxide detectors, etc)

Adapted from Stepping Stones<sup>20</sup>

<sup>a</sup> There are different staff-to-child ratios for small-family homes, large-family homes, and centers. Ratios are also based on the ages of the children. Specific staff-to-child ratios are described in standard (1.1.1.2).<sup>21</sup>

## BARRIERS TO HIGH-QUALITY ECE

Many families have no quality child care options in their immediate communities.<sup>2</sup> The positive effects from high-quality programs and the negative effects from poor-quality programs are magnified in children from disadvantaged situations or with special needs, and yet, these children are least likely to have access to quality early education and child care.<sup>2,4,22,23</sup> Barriers to

high-quality ECE include inadequate funding and staff education as well as inconsistent regulation and enforcement.<sup>15</sup> Funding on the federal, state, and local levels (even when combined with parental fees) often does not provide adequate financial support to ensure proper training, reasonable compensation, or career advancement opportunities for the early education workforce.<sup>2-4,22-25</sup> Adequate compensation of early education providers promotes

quality by recruiting and retaining trained staff and their directors. Young children, especially infants and toddlers, need stable, positive relationships with their caregivers to thrive, and staff retention helps maintain those strong relationships.<sup>19</sup> Budget restrictions also limit the number of children who can be served.<sup>22</sup> As of 2012, 23 states had wait lists for their child care subsidy programs, and many areas have wait lists for Head Start programs.<sup>4</sup> Finally, budget restrictions may limit a program's ability to hire child care health consultants. ECE settings rarely have health professionals like school nurses despite the fact that the children served are younger, less able to express their symptoms, and are prone to more frequent infectious illnesses.<sup>26</sup> Some states require child care health consultants to visit infant and toddler programs regularly.

State regulations of ECE programs vary dramatically because of an absence of national regulation, and this contributes to variation in ECE quality. Family child care settings have different regulations than center-based care, and some forms of child care are exempt from regulation.<sup>23,25,27</sup> The variability in regulation, staff screening, staff training, and the availability of supports such as child care health consultation contribute to a wide variation in quality. Even when regulations are present, enforcement varies, and only 44 states conduct annual health and safety inspections.<sup>23,25</sup>

### STEPS TO IMPROVE QUALITY ECE

The definition of quality in ECE is becoming more evidence based as newer, validated measures become available. State licensing standards have been the traditional benchmarks, but they set a minimum standard that is typically considerably less than the recommendations of health and safety experts.<sup>20,21,23,25,27,28</sup> National

organizations including the AAP, the American Public Health Association, and the National Association for the Education of Young Children have developed standards and voluntary systems of accreditation that are often more robust than state licensing regulations. The publication *Caring for Our Children, Third Edition*<sup>21</sup> includes evidence-based practice standards for nutrition, safety, hygiene, staff-to-child ratios, and numerous other subjects that have been shown to improve the quality of child care.<sup>29,30</sup>

The quality rating and improvement system (QRIS) is a method of quality improvement that is being implemented in >75% of states.<sup>25</sup> QRISs use research-based, measurable standards to define quality levels, which are often denoted by a star rating system. QRISs often use incentives (such as staff scholarships, tiered reimbursement for child care subsidies, and technical assistance and/or professional development) as strategies to improve ECE quality. Unfortunately, the QRIS does not always include key health and safety standards. Those who are responsible for implementing QRISs would benefit from input from pediatricians, who are familiar with health issues and with the challenges of translating research into practice. Child care resource and referral agencies are available nationwide, and they serve as regional resources for information about quality child care. They often also serve as a resource for QRIS implementation; however, most child care resource and referral agencies do not have adequate funding to hire early childhood health consultants as part of that technical assistance.

Improving access to child care health consultation is another way to positively affect the health and safety of children in ECE. Child care health consultants are health professionals who are trained to provide technical assistance and

develop policies about health issues, such as medication administration, infection control, immunization, and injury prevention.<sup>31</sup> Child care health consultants also can provide developmental, hearing, oral health, and vision screenings and provide assistance with integrating children with special health care needs into ECE settings.<sup>29,32,33</sup>

The opportunities to use ECE programs to teach healthy habits (including healthy food choices, increased physical activity, and oral health practices) should not be overlooked. These messages can then be shared with families. Health screening services (such as vision and dental testing) also can be provided.

Innovative strategies to promote access to quality care and education also include state initiatives to promote cross-disciplinary teams (such as Early Childhood Advisory Councils), public-private funding partnerships, and universal preschool programs.

### RECOMMENDATIONS FOR PEDIATRICIANS

1. Ask families what child care arrangements they have made for their children, and educate them about the importance of high-quality child care. Resources include brochures (listed in Resources); checklists of quality, which can be accessed at [www.aap.org/healthychildcare](http://www.aap.org/healthychildcare); and referrals to local child care resources and referral agencies, which can be found at [www.childcareaware.org](http://www.childcareaware.org).
2. Become educated about high-quality child care through the resources on the AAP Healthy Child Care Web site ([www.healthychildcare.org](http://www.healthychildcare.org)), in *Caring for Our Children*,<sup>21</sup> and others (see Resources).
3. Be a medical home by participating in the 3-way collaboration with families and ECE professionals. The medical home concept of comprehensive, coordinated care

is particularly critical for children with special health care needs. Three-way communication among the pediatricians, families, and ECEs can facilitate shared knowledge of the unique child care needs of children with special needs and foster implementation of child care policies and practices to meet those needs.<sup>32,33</sup> These activities are likely to improve access to ECE for these patients. Detailed care plans written in lay language assist in this collaboration. Medical team-based or time-based coding and billing may provide support for these efforts.

4. Advise families and early educators when children are having behavioral problems in ECE and are at risk for expulsion. Explain the triggers for behavior problems and recommend behavioral health resources as needed.<sup>16</sup> Some states have behavioral health resources available for young children through an Early Childhood Mental Health Consultation program. Read the AAP policy statement and technical report on toxic stress<sup>19</sup> and learn about the resources that are available through each state's early care and education system.

#### RECOMMENDATIONS FOR COMMUNITY-LEVEL ACTIONS

5. Discuss the importance of guidelines on safe sleep, immunization, safe medication administration, infection control, healthy diet and physical activity, oral health, medical home access, and other health topics with local child care centers. Share resources such as *Caring for Our Children*,<sup>21</sup> *Bright Futures*, and the AAP Healthy Child Care Web site ([www.aap.org/healthychildcare](http://www.aap.org/healthychildcare))
6. Become a child care health consultant or support your local child care health consultant nurses. Consider conducting a health and safety assessment

in a local child care program by using a national health and safety checklist (<http://cchp.ucsf.edu/content/forms#hscr>).

7. Educate policy makers about the science that supports the benefits of quality early child care and education and, conversely, the lost opportunities and setbacks that result from poor-quality care.<sup>15,24</sup>

#### RECOMMENDATIONS FOR NATIONAL- AND STATE-LEVEL ACTIONS

8. Close the gaps between state regulations and the quality standards outlined in *Caring for Our Children* by encouraging strong state regulation and enforcement. Each AAP chapter has a legislative group that can help target these public policy makers with visits and letters. Nearly every AAP chapter also has an Early Childhood Champion, a pediatrician who is familiar with the early education and child care needs in that chapter and has knowledge about local resources to assist your efforts. Find your Early Childhood Champion at [www.aap.org/coec](http://www.aap.org/coec).
9. Support a QRIS in your state if one is being implemented, and encourage robust child health and safety standards based on *Caring for Our Children*.
10. Advocate for improved funding for child care health consultation.
11. Encourage training of ECE professionals on health and safety topics, such as medication administration and safe sleep practices for infants. Consider providing training that uses the Healthy Futures curriculum provided on the AAP Healthy Child Care Web site ([www.aap.org/healthychildcare](http://www.aap.org/healthychildcare)).
12. Advocate and encourage expanded access to high-quality ECE through funding, such as expanded Child Care

Developmental Block grants or Head Start funding. Reach out to legislators on the national and state levels to make the case for investing in quality early education as a good business, education, and social investment that has shown a strong return on investment. Encourage pediatric representation on state Early Childhood Advisory Councils or similar state groups to make the case to state officials personally.

#### RESOURCES

American Academy of Pediatrics. Choosing Child Care: What's Best for Your Family [Pamphlet]. Elk Grove Village, IL: American Academy of Pediatrics; 2002. Available through the AAP publications department: 800/433-9016 or at <https://patiented.solutions.aap.org/handout.aspx?gbsoid=156406>

American Academy of Pediatrics. Healthy Child Care Web Site. This AAP Web site has resources for health and ECE professionals. Available at: [www.aap.org/healthychildcare](http://www.aap.org/healthychildcare)

American Academy of Pediatrics. The Pediatrician's Role in Promoting Health and Safety in Child Care. Elk Grove Village, IL: American Academy of Pediatrics; 2001. Available at: [www.aap.org/healthychildcare](http://www.aap.org/healthychildcare)

Child Care Aware, National Association of Child Care Resource and Referral Agencies (NACCRRA). Is this the right place for my child? 38 research-based indicators of quality child care. Available at: [http://childcareaware.org/wp-content/uploads/2016/04/Eng\\_121m.pdf](http://childcareaware.org/wp-content/uploads/2016/04/Eng_121m.pdf)

Child Care Aware, National Association of Child Care Resource and Referral Agencies (NACCRRA). Quality child care matters for infants and toddlers. Available at: [http://va.gapitc.org/wp-content/uploads/2012/10/May-9-2012-9-Quality\\_Infant\\_and\\_Toddler\\_Child\\_Care\\_Matters.pdf](http://va.gapitc.org/wp-content/uploads/2012/10/May-9-2012-9-Quality_Infant_and_Toddler_Child_Care_Matters.pdf)

Child Care Resource and Referral Agencies, local referral agencies that can assist families in finding quality, affordable programs. Available at: <http://childcareaware.org/families/choosing-quality-child-care/selecting-a-child-care-program/>

Head Start. Early childhood learning and knowledge center. Available at: <http://eclkc.ohs.acf.hhs.gov/hslc/ta-system/health>

National Association for the Education of Young Children. Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8. 3rd ed. Washington, DC: National Association for the Education of Young Children (NAEYC); 2009. Available at: [www.naeyc.org/files/naeyc/file/positions/PSDAP.pdf](http://www.naeyc.org/files/naeyc/file/positions/PSDAP.pdf)

National Resource Center for Health and Safety in Child Care and Early Education. Available at: [www.nrckids.org](http://www.nrckids.org)

Zero to Three. Early Experiences Matter Policy Guide. Washington, DC: Zero to Three; 2009. Available at: <https://www.zerotothree.org/resources/119-early-experiences-matter-policy-guide>

Zero to Three. Matching Your Infant's and Toddler's Style to the Right Child Care Setting. Washington, DC: Zero to Three; 2001. Available at: <https://www.zerotothree.org/resources/86-matching-your-infant-s-or-toddler-s-style-to-the-right-child-care-setting>

#### LEAD AUTHOR

Elaine A. Donoghue, MD, FAAP

#### COUNCIL ON EARLY CHILDHOOD EXECUTIVE COMMITTEE, 2016–2017

Jill Sells, MD, FAAP, Chairperson  
Elaine Donoghue, MD, FAAP  
Marian Earls, MD, FAAP  
Andrew Hashikawa, MD, FAAP  
Alan Mendelsohn, MD, FAAP  
Terri McFadden, MD, FAAP  
Georgina Peacock, MD, MPH, FAAP  
Seth Scholer, MD, FAAP  
Jennifer Takagishi, MD, FAAP  
Douglas Vanderbilt, MD, FAAP  
P. Gail Williams, MD, FAAP

#### LIAISONS

David Willis, MD, FAAP, *Maternal and Child Health Bureau*  
Dina Lieser, MD, FAAP, *Maternal and Child Health Bureau*  
Rebecca Parlakian, MA Ed, *Zero to Three*  
Lynette Fraga, PhD, *Child Care Aware*  
Barbara Sargent, PNP, *National Association of Pediatric Nurse Practitioners*  
Alecia Stephenson, *National Association for the Education of Young Children*  
Laurel Hoffmann, MD, *AAP Section on Pediatric Trainees*

#### STAFF

Charlotte O. Zia, MPH, CHES

#### PAST MEMBERS

Beth DelConte, MD, FAAP  
Danette Glassy, MD, FAAP  
Barbara U. Hamilton, MA, Maternal and Child Health Bureau  
Claire Lerner, LCSW, *Zero to Three*  
Abbey Alkon, RN, PNP, PhD, *National Association of Pediatric Nurse Practitioners*

#### ABBREVIATIONS

AAP: American Academy of Pediatrics  
ECE: early childhood education  
QRIS: quality rating and improvement system

**FINANCIAL DISCLOSURE:** The authors have indicated they have no financial relationships relevant to this article to disclose.

**FUNDING:** No external funding.

**POTENTIAL CONFLICT OF INTEREST:** The authors have indicated they have no potential conflicts of interest to disclose.

#### REFERENCES

1. US Census Bureau. Survey of income and program participation. Available at: [www.childstats.gov/americaschildren](http://www.childstats.gov/americaschildren). Accessed August 22, 2016
2. Sandstrom H, Giesen L, Chaudrey A. How Contextual Constraints Affect Low Income Working Parents Child Care Choices. Washington, DC: Urban Institute; 2012. Available at: [www.urban.org/research/publication/how-contextual-constraints-affect-low-income-working-parents-child-care-choices](http://www.urban.org/research/publication/how-contextual-constraints-affect-low-income-working-parents-child-care-choices). Accessed August 22, 2016
3. National Survey of Early Care and Education Team. Number and Characteristics of Early Care and Education (ECE) Teachers and Caregivers: Initial Findings from the National Survey of Early Care and Education. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services; 2013. Available at: [www.acf.hhs.gov/opre/resource/number-and-characteristics-of-early-care-and-education-ece-teachers-and-caregivers](http://www.acf.hhs.gov/opre/resource/number-and-characteristics-of-early-care-and-education-ece-teachers-and-caregivers). Accessed August 22, 2016
4. Smith K, Adams N. Child Care Subsidies Critical for Low Income Families Amid Child Care Expenses. Durham, NH: University of New Hampshire, Carsey School of Public Policy; 2013. Available at: [www.carseyinstitute.unh.edu/carsey/195/](http://www.carseyinstitute.unh.edu/carsey/195/). Accessed August 22, 2016
5. Burchinal MR, Cryer D, Clifford RM, Howes C. Caregiver training and classroom quality in child care centers. *Appl Dev Sci*. 2002;6(1):2–11
6. Burchinal M, Vandergrift M, Pianta R, Mashburn A. Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Child Res Q*. 2010;25(2):166–176
7. Campbell FA, Pungello EP, Burchinal M, et al. Adult outcomes as a function of an early childhood educational program: an Abecedarian Project follow-up. *Dev Psychol*. 2012;48(4):1033–1043
8. Vandell DL, Belsky J, Burchinal M, Steinberg L, Vandergrift N; NICHD

- Early Child Care Research Network. Do effects of early child care extend to age 15 years? Results from the NICHD study of early child care and youth development. *Child Dev.* 2010;81(3):737–756
9. Campbell FA, Pungello EP, Miller-Johnson S, Burchinal M, Ramey CT. The development of cognitive and academic abilities: growth curves from an early childhood educational experiment. *Dev Psychol.* 2001;37(2):231–242
  10. Peisner-Feinberg ES, Burchinal MR, Clifford RM, et al. The relation of preschool child-care quality to children's cognitive and social developmental trajectories through second grade. *Child Dev.* 2001;72(5):1534–1553
  11. The NICHD Early Child Care Research Network. Early child care and children's development in the primary grades: follow-up results from the NICHD Study of Early Child Care. *Am Educ Res J.* 2005;42(3):537–570
  12. Zhai F, Brooks-Gunn J, Waldfogel J. Head Start and urban children's school readiness: a birth cohort study in 18 cities. *Dev Psychol.* 2011;47(1):134–152
  13. Barnett WS. Effectiveness of early educational intervention. *Science.* 2011;333(6045):975–978
  14. Burger K. How does early childhood care and education affect cognitive development? An international review of the effects of early interventions for children from different social backgrounds. *Early Child Res Q.* 2010;25(2):140–165
  15. Gilliam WS. Implementing policies to reduce the likelihood of preschool expulsion. Foundation for Child Development Brief. Available at: <http://fcd-us.org/sites/default/files/ExpulsionBriefImplementingPolicies.pdf>. Accessed August 22, 2016
  16. Alkon A, Ramler M, MacLennan K. Evaluation of mental health consultation in child care centers. *Early Child Educ J.* 2003;31(2):91–99
  17. Institute of Medicine, Board on Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Shonkoff JP, Phillips DA, eds. Washington, DC: National Academies Press; 2000
  18. Shonkoff JP, Boyce WT, McEwen BS. Neuroscience, molecular biology, and the childhood roots of health disparities: building a new framework for health promotion and disease prevention. *JAMA.* 2009;301(21):2252–2259
  19. Garner AS, Shonkoff JP; Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; Section on Developmental and Behavioral Pediatrics. Early childhood adversity, toxic stress, and the role of the pediatrician: translating developmental science into lifelong health. *Pediatrics.* 2012;129(1). Available at: [www.pediatrics.org/cgi/content/full/129/1/e224](http://www.pediatrics.org/cgi/content/full/129/1/e224)
  20. American Academy of Pediatrics; American Public Health Association; National Resource Center for Health and Safety in Child Care and Early Education. *Stepping Stones to Caring for Our Children*. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2013
  21. American Academy of Pediatrics; American Public Health Association; National Resource Center for Health and Safety in Child Care and Early Education. *Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Early Care and Education Programs*. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2011
  22. Magnuson KA, Waldfogel J. Early childhood care and education: effects on ethnic and racial gaps in school readiness. *Future Child.* 2005;15(1):169–196
  23. Murphey D, Cooper M, Forry N. The Youngest Americans: A Statistical Portrait of Infants and Toddlers in the United States. Bethesda, MD: Child Trends; 2013. Available at: [www.childtrends.org/publications](http://www.childtrends.org/publications). Accessed August 22, 2016
  24. Institute of Medicine. *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation*. Washington, DC: National Academies Press; 2015
  25. Child Care Aware. We can do better: 2013 update. Available at: [www.childcareaware.org](http://www.childcareaware.org). Accessed August 22, 2016
  26. Hurwitz ES, Gunn WJ, Pinsky PF, Schonberger LB. Risk of respiratory illness associated with day-care attendance: a nationwide study. *Pediatrics.* 1991;87(1):62–69
  27. National Resource Center for Health and Safety in Child Care and Early Education. State Regulations. Available at: <https://childcareta.acf.hhs.gov/resource/state-and-territory-licensing-agencies-and-regulations>. Accessed June 22, 2017
  28. Fiene R. 13 Indicators of Quality Child Care: Research Update. Washington, DC: Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation; 2002. Available at <http://aspe.hhs.gov/hsp/ccquality-ind02>. Accessed August 22, 2016
  29. Isbell P, Kotch J, Savage E, Gunn E, Lu L, Weber D. Improvement of child care programs' health and safety policies and practices and children's access to health care, linked to child care health consultation. NHA Dialog 2013. Available at: <https://journals.uncc.edu/dialog/article/view/93>. Accessed August 22, 2016
  30. Alkon A, Bernzweig J, To K, Wolff M, Mackie JF. Child care health consultation improves health and safety policies and practices. *Acad Pediatr.* 2009;9(5):366–370
  31. Alkon A, Bernzweig J, To K, Mackie JF, Wolff M, Elman J. Child care health consultation programs in California: models, services, and facilitators. *Public Health Nurs.* 2008;25(2):126–139
  32. American Academy of Pediatrics; Medical Home Initiatives for Children With Special Needs Project Advisory Committee. The medical home. *Pediatrics.* 2002;110(1):184–186 Reaffirmed August 2008
  33. American Academy of Pediatrics Council on Children with Disabilities. Care coordination in the medical home: integrating health and related systems of care for children with special health care needs. *Pediatrics.* 2005;116(5):1238–1244

## Quality Early Education and Child Care From Birth to Kindergarten

Elaine A. Donoghue and COUNCIL ON EARLY CHILDHOOD

*Pediatrics* 2017;140;

DOI: 10.1542/peds.2017-1488 originally published online July 31, 2017;

<b>Updated Information &amp; Services</b>	including high resolution figures, can be found at: <a href="http://pediatrics.aappublications.org/content/140/2/e20171488">http://pediatrics.aappublications.org/content/140/2/e20171488</a>
<b>References</b>	This article cites 19 articles, 4 of which you can access for free at: <a href="http://pediatrics.aappublications.org/content/140/2/e20171488.full#ref-list-1">http://pediatrics.aappublications.org/content/140/2/e20171488.full#ref-list-1</a>
<b>Subspecialty Collections</b>	This article, along with others on similar topics, appears in the following collection(s): <b>Current Policy</b> <a href="http://classic.pediatrics.aappublications.org/cgi/collection/current_policy">http://classic.pediatrics.aappublications.org/cgi/collection/current_policy</a> <b>Council on Early Childhood</b> <a href="http://classic.pediatrics.aappublications.org/cgi/collection/committee_on_early_childhood_adopt_dept_care">http://classic.pediatrics.aappublications.org/cgi/collection/committee_on_early_childhood_adopt_dept_care</a> <b>Developmental/Behavioral Pediatrics</b> <a href="http://classic.pediatrics.aappublications.org/cgi/collection/development:behavioral_issues_sub">http://classic.pediatrics.aappublications.org/cgi/collection/development:behavioral_issues_sub</a>
<b>Permissions &amp; Licensing</b>	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="https://shop.aap.org/licensing-permissions/">https://shop.aap.org/licensing-permissions/</a>
<b>Reprints</b>	Information about ordering reprints can be found online: <a href="http://classic.pediatrics.aappublications.org/content/reprints">http://classic.pediatrics.aappublications.org/content/reprints</a>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since . Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN:

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



# PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Quality Early Education and Child Care From Birth to Kindergarten**

Elaine A. Donoghue and COUNCIL ON EARLY CHILDHOOD

*Pediatrics* 2017;140;

DOI: 10.1542/peds.2017-1488 originally published online July 31, 2017;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/140/2/e20171488>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since . Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN:

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

