

# **Changes in the Content of Developmental Care with Enrollment in Health Insurance**

*Prepared for:*



*Prepared by:*

**Patricia Barreto and Moira Inkelas  
The University of California at Los Angeles**

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## Abstract

The Los Angeles Healthy Kids program is a county-based health insurance program providing coverage for children in families with household income below 300 percent of the federal poverty level who are ineligible for Healthy Families and Medi-Cal. Medical coverage is intended to improve access for acute illnesses, chronic care and quality preventive care. This special study examines the extent to which preventive care for children ages 1-5 years is consistent with current recommendations from the American Academy of Pediatrics (AAP) for developmental care. Recommendations include eliciting parent concerns, using a structured developmental screening tool at age-appropriate intervals, and providing parents with information. This study describes the content of developmental care for new Healthy Kids enrollees and the extent to which this care improves after one year of enrollment in Healthy Kids.

Data are from a client telephone survey conducted with parents shortly after enrollment in Healthy Kids (baseline) and repeated 12 months later (follow-up). Parents of 474 children ages 12–72 months participated with a response rate of 82 percent. Parents answered questions about the content of developmental care services received. Parent responses refer to care received in the 6 months prior to the survey.

At baseline and follow-up, more than half (57 percent) of parents reported having a concern about their child's learning, development or behavior. Despite AAP recommendations for developmental surveillance as a regular part of well child visits, only 24 percent of families reported having been asked if they had any concerns about their young child during the 6 months prior to enrolling in Healthy Kids. This rate increased to 33 percent ( $p < 0.01$ ) after enrollment in Healthy Kids. Rates of parents receiving information about their concerns were equally low at baseline and follow-up (24 percent). Of these parents, 80 percent wished they had received information about their concerns. The proportion of parents receiving age-appropriate parent education ("anticipatory guidance") increased significantly for four of eleven health education topics after enrollment in Healthy Kids.

This study shows that enrollment in Healthy Kids is associated with some improvement in eliciting parent concerns and providing health education, but participation did not increase information for parents about their specific concerns or affect the proportion of children for whom parents have some type of concern regarding learning, development or behavior. The lack of improvement in these areas despite enrollment in a medical insurance program likely results from larger systems-level barriers to adequate developmental assessment/monitoring and anticipatory guidance within primary care. Findings suggest that these barriers such as time, competing demands, and incentives in primary care are not reduced simply by enrollment in health insurance.

## **Introduction**

The Los Angeles Healthy Kids program is a county-based health insurance program providing coverage for children in families with household incomes below 300 percent of the federal poverty level (FPL) who are ineligible for Healthy Families and Medi-Cal. The enrollees are largely low-income undocumented immigrant children but include some documented children above the income level for Healthy Families (250 percent of the FPL). The program was created in 2003 and initially covered children 0-5 years of age. In 2004, the Healthy Kids was expanded to cover older children ages 6 through 18.

The First 5 LA strategic plan contains goals to achieve positive developmental outcomes for young children (<http://www.first5la.org/Strategic-Plan-2004-2009>). Medical coverage is intended to improve access for acute illnesses, chronic care and quality preventive care.

Guidelines from the American Academy of Pediatrics (AAP) emphasize the fact that developmental monitoring and health education (termed “anticipatory guidance”) are an integral part of preventive care for young children (American Academy of Pediatrics 2006; Green et al. 2002). These guidelines state that “early identification of developmental disorders is critical to the well-being of children and their families ... (and) is an integral function of the primary care medical home and an appropriate responsibility of all pediatric health care professionals.” AAP recommendations in 2006 encouraged pediatric health professionals to adopt effective strategies for the early identification of developmental disorders including regular monitoring in well child visits and use of a structured developmental screening tool at ages 9, 18, and 24 or 30 months of age (American Academy of Pediatrics 2006).

The AAP policy statement in 2006 documents the gap between recommended care and what young children receive as part of developmental preventive care. National studies show wide variation in the clinical strategies used by pediatric health professionals for the early identification of developmental disorders (Sand et al. 2005). These practices have an impact on early identification and response to developmental concerns. Some studies report that up to 70 percent of developmental disorders remain undetected until school entry (Palfry et al. 1987). This special study describes the content of developmental preventive care for new Healthy Kids enrollees and the extent to which care changes with enrollment in Healthy Kids.

## **Methods**

The Healthy Kids evaluation was launched in 2004 and includes a qualitative analysis (focus groups and interviews), a process analysis based on public health and health plan administrative data, and a client (parent) survey. The client survey was conducted in two waves among parents of children who were ages 12–72 months at the time of enrollment in the Healthy Kids program. The first wave of the survey was conducted between April and December 2005 with parents of 549 new enrollees. Reported experiences at baseline refer to the child's experiences in the past 6 months while uninsured. The second wave was conducted between May 2005 and January 2006 among the same families that had been enrolled for one year in the program. The response rate for the first wave was 82 percent of the originally sampled population and 88 percent for the second wave, which reached 72 percent of the original sample. The majority of interviews were conducted in Spanish (88 percent).

The client survey included access-to-care items from a related child health insurance survey in San Mateo County with questions covering prior health insurance coverage, health status, access to care, unmet need, and satisfaction (Howell et al. 2008). The survey also

examined the content of developmental care using items adapted from the Promoting Healthy Development Survey (PHDS) developed by the national Child and Adolescent Health Measurement Initiative (Bethell et al. 2001) Parents were asked a series of questions about concerns regarding their child's learning, development or behavior (adapted from the Parent Evaluation of Developmental Status (PEDS) published by Glascoe in 2002); whether their provider asked if they had any such concerns; and whether their provider gave them specific information to address their concerns. These questions were asked of parents at the time of enrollment and therefore reflect families' experiences while uninsured. One year later, these same questions were asked of the families and therefore these responses reflect their experiences while enrolled in Healthy Kids (see table I). We analyzed four areas of developmental care in this study: (1) parent reports of developmental/behavioral concerns, (2) whether or not parents were asked about these concerns, (3) parent recall of a developmental assessment, and (4) parent reports of anticipatory guidance received. Parent responses at baseline and follow-up were compared used a chi-square test.

## **Results**

At baseline, more than half (57 percent) of parents of newly enrolled children reported a developmental/behavioral concern (table II). There was no change between baseline and follow-up in the proportion of parents reporting developmental/behavioral concerns regarding their child.

**Table I: Content Areas for Developmental Preventive Care in Healthy Kids Client Survey**

Content Area	Survey Items
(1) Parent reports of developmental/behavioral concerns	Series of questions from the PEDS developmental screening tool ( <i>see Appendix A for PEDS tool and questions</i> ) “In the last six months, did you have any concerns about child’s learning, development, or behavior?”
(2) Parent report that the child’s health care provider(s) asked about developmental/behavioral concerns, and provider response to those concerns	“In the last six months, did your child’s doctors or other health providers ask if you had concerns about child’s learning, development or behavior?” “In the last six months, did your child’s doctors or other health providers give you specific information to address these concerns that you just told me about?”
(3) Parental recall of any type of developmental/behavioral assessment	“During the past six months, did your child’s doctors or other health providers ever tell you that they were doing what doctors call a “developmental assessment” or test of your child’s development?” “During the past six months, did your child’s doctors or other health providers ever have child roll over, pick up small objects, stack blocks, throw a ball or recognize different colors?” “During the past six months, did your child’s doctors or other health providers ever ask you if child did any of these things?”
(4) Parental recall of the content of anticipatory guidance care provided the clinician and the parents’ preferences for anticipatory guidance topics	“During the past 6 months, did your child’s doctors or other health providers talk with you about ( <i>see Appendix B for complete list of age-appropriate questions</i> ): --things you can do to help your child grow and learn? --guidance and discipline techniques to use with your child? --toilet training? --how to make your house safe?” “Which of the (above) issues that we just mentioned ( <i>see Appendix B for complete list of issues</i> ) would you have wished that your doctor would have discussed with you?”

In contrast, the proportion of parents reporting being asked if they had concerns about behavior or development within the past 6 months was lower at baseline (24 percent) than at follow-up one year later (33 percent) ( $p < 0.01$ ) This represents a significant increase in the proportion of families reporting being asked about developmental/behavioral concerns after enrollment in Healthy Kids Among the subset of parents reporting developmental/behavioral

concerns, only one-quarter (24 percent) reported at baseline or at follow-up that they had received information about those concerns from their child’s health care provider. Among those whose provider did not give them information regarding their concerns, approximately 80 percent of families wished their provider had done so.

**Table II: Parental Reports of Developmental/Behavioral Concerns and Provider Response to Those Developmental/Behavioral Concerns at Baseline and Follow-up (N=474)**

<b>Topic</b>	<b>Baseline</b>	<b>Follow-up</b>	<b>p-value</b>
	(% yes)		(chi square)
Any concerns <sup>1</sup>	57.3	55.4	0.59
Provider asked about concerns <sup>2</sup>	23.7	33.1	0.01*
Of parents with current concerns, provider gave information that addressed concern <sup>2</sup>	23.8	24.9	0.79
Of parents who did not receive information, wish that provider had done so <sup>2</sup>	79.6	82.0	0.57

<sup>1</sup> Reflects all parents who reported one or more specific concerns currently as well as those reporting any developmental concern in the past 6 months.

<sup>2</sup> Refers to care in past 6 months.

\* Statistically significant difference between baseline and follow-up according to Chi-Square test

Approximately one-third of parents (35 percent) recalled being told that their provider was performing a developmental assessment in the 6 months prior to enrollment (see table III). This rate was not statistically different after one year of enrollment in Healthy Kids (34 percent). A significantly higher proportion of parents reported having been asked specific questions that are frequently part of structured developmental screening (e.g., was the child asked to recognize colors) at follow-up than at baseline (37 percent versus 29 percent, p=0.01). When parents reporting “no” were further queried if the provider had asked them about their child’s ability to complete these tasks, a similar proportion of parents at baseline and follow-up (5 percent) said this had occurred.

**Table III: Parent Recall of Developmental/Behavioral Assessment at Baseline and Follow-up (N=474)**

<b>Topic</b>	<b>Baseline</b>	<b>Follow-Up</b>	<b>p value</b>
	(% yes)		
Provider told parent that they were doing what doctors call a “developmental assessment” or test of child’s development	34.7	33.5	0.72
Provider had the child roll over, pick up small objects, stack blocks, throw a ball or recognize different colors	29.1	37.2	0.01*
Of parents reporting “no” to being told about an assessment and to the provider observing the child’s development, parent reports being asked if child did any of these things	5.2	5.3	0.95

\* Statistically significant difference between baseline and follow-up according to Chi-Square test

The proportion of parents receiving guidance within the past 6 months on eleven age-specific anticipatory guidance topics increased between baseline and follow-up for four of eleven measures (table IV) and did not change for the remaining seven measures. For example, 26 percent of parents at baseline and 33 percent at follow-up reported that their provider discussed guidance and discipline techniques ( $p = 0.03$ ). More parents reported discussion of “baby proofing” their homes, social development, and common childhood dangers at follow-up than at baseline.

Health education topics that were not addressed more frequently after obtaining medical insurance included the following: things that parents can do to help the child grow and learn; the kinds of behaviors that parents can expect to see in the child as (he/she) gets older; the importance of reading with the child; issues related to child care; issues related to food and feeding the child; and the words and phrases the child uses and understands (see appendix B).

**Table IV: Parent Recall of Receiving Anticipatory Guidance Topics at Baseline and Follow-up**

Anticipatory Guidance Topic	Baseline	Follow-Up	p value*
	(% yes)		
Guidance and discipline techniques <sup>1</sup>	26.3	33.1	0.03*
How to make the house safe <sup>1</sup>	37.5	47.3	0.01*
How child is learning to get along with other children <sup>2</sup>	31.2	40.5	0.01*
Dangerous situations, places and objects <sup>2</sup>	39.6	50.0	0.01*

<sup>1</sup>Comparison includes children ages 1-5 years of age at baseline interview

<sup>2</sup>Comparison includes children ages 2-5 years of age at baseline interview

\* Statistically significant difference between baseline and follow-up according to Chi-Square test

Table V compares parent reports of whether or not the lack of guidance on health education topics was information that they would have found helpful. The proportion of parents reporting not receiving guidance within the past 6 months on a health education topic that would have been helpful to them decreased between baseline and follow-up declined for two of eleven measures (table IV) and did not change for the remaining nine measures. At baseline, approximately 35 percent of families reported wishing that their provider had discussed toilet training with them; after one year of enrollment, a smaller proportion (23 percent) had not discussed but wished that their provider had discussed this topic with them ( $p < 0.01$ ). Similarly, the proportion of families reporting that they had not discussed but would have found it helpful to discuss how their child is learning to get along with others was lower after one year of enrollment (50 percent versus 41 percent,  $p = 0.02$ ). Among all other topics (see appendix B), the proportion of parents that wished their provider had discussed these did not change between baseline and follow-up.

**Table V: Parents’ Preferences for Anticipatory Guidance Topics, at Baseline and Follow-up**

Anticipatory Guidance Topic	Baseline	Follow-Up	p value
	(% yes)		
Toilet training <sup>1</sup>	34.5	22.8	0.01*
How child is learning to get along with other children <sup>2</sup>	49.8	41.2	0.02*

<sup>1</sup> Comparison includes children ages 1–5 years of age at baseline interview

<sup>2</sup> Comparison includes children ages 2–5 years of age at baseline interview

\* Statistically significant difference between baseline and follow-up according to Chi-Square test

## Discussion

This study shows relatively high levels of parent reports of developmental/behavioral concern.

While some measures of the content of developmental care, improved between baseline and follow-up periods, parents reported low rates of monitoring as well as response to and alleviation of their concerns at both baseline and follow-up.

*Content of Developmental Care for Healthy Kids Enrollees Compared to National Data.* Comparison to national data (U.S. Department of Health and Human Services 2005) shows that rates of concerns among parents of children in Healthy Kids are similar to low-income populations nationally, although statistical comparisons of the samples are not possible due to surveying differences. For example, parents of children in Medicaid or the State Children’s Health Insurance Program (SCHIP) report somewhat similar rates of having any concerns (52 percent nationally compared to 55 percent in Healthy Kids after one year of enrollment). Rates of being asked about having any concerns regarding the child’s learning, development or behavior also appear similar to children in Medicaid or SCHIP (35 percent nationally compared to 33 percent of parents after one year of enrollment in Healthy Kids). Rates were less favorable for Healthy Kids than for children nationally in Medicaid or SCHIP for parent reports of receiving any information about their concerns (43 percent nationally compared to 25 percent of children

in Healthy Kids after one year of enrollment). Enrolling in Healthy Kids is associated with a significant increase in being asked about concerns (from 23.7 to 33.1 percent) at baseline and follow-up, bringing this measure closer to national estimates for low-income children enrolled in health insurance (35 percent for Medicaid/SCHIP). Parents report persistently low rates (25 percent) of receiving information about their concerns and no change in their level of developmental/behavioral concern after one year of enrollment in Healthy Kids.

The study suggests modest improvement in the content of developmental preventive care with greater discussion at follow-up compared to baseline for about one-fifth of possible health education topics. Parents did not report any greater frequency of being told that their child's health care provider was doing a developmental assessment, but a slightly larger proportion of parents at follow-up than at baseline recalled the provider testing the child in areas that are generally part of a structured development screening.

***Content of Developmental Care for Healthy Kids Enrollees Compared to American Academy of Pediatrics' Recommendations.*** Despite some modest improvements, these results show that parents are receiving relatively little developmental care content when Healthy Kids results are compared with AAP recommendations for developmental care. Enrollment in health insurance is associated with some change in the content of developmental care but appears lower than or only at par with parent experiences nationally in public insurance programs. The rates on all developmental preventive care measures fall substantially short of national professional recommendations.

Recently available information on preventive care and preventive care outcomes in California point to systematically poor performance compared to many other states and to the national average. For example, original analysis of the 2007 National Survey of Children's

Health (NSCH) shows that California has a very low rate of young children receiving a structured developmental screening (14 percent) with only six states having lower rates than California. It is useful to note that children of all income groups receive poor developmental care according to this measure with rates equally low for children in households with income below 100 percent of the federal poverty level (13 percent) and children with households with income at 400 percent FPL or above (14 percent). It is important to note that a state such as North Carolina with a long-standing partnership and improvement effort between the Medicaid program and the state's AAP chapter not only has the highest state average nationally (47 percent) but stands out among states in having a slightly higher rate for the lowest income group (52 percent) compared to the highest income group (42 percent). This shows that it is possible for children in public insurance programs to receive comparable and even better developmental preventive care as other children.

***Content of Developmental Care for Healthy Kids Enrollees and Current Systems of Developmental Care within Primary Care Pediatrics.*** It is helpful to examine the content of developmental care and persistent parental developmental/behavioral concerns after enrollment in Healthy Kids in relation to current systems of developmental care within primary care pediatrics and not exclusively as the result of a medical insurance program. Because clinical observation of young children during preventive visits is known to miss up to 70 percent of developmental delays (Palfrey et al. 1987), the AAP recommends use of a standardized developmental screening tool that has been validated and adopted successfully within pediatric practices as a more effective means to identify developmental delays in children (Glascoe 2002). For example, screening tools, such as the PEDS and the Ages and Stages Questionnaire (ASQ), have higher sensitivity and specificity rates than traditional observational tools, such as the

Denver, and also have the advantage of involving parents in observing and reporting on their own child's development (American Academy of Pediatrics 2006). Focusing on parental concerns allows providers to more effectively target their advice and referrals so that the process may identify delays in a small proportion of children but also helps parents with their questions and educational needs for a very large proportion of children (Glascoe 2006). However, the 2007 NSCH reflects national pediatrician surveys that find that only about 15 percent of pediatricians routinely use any type of structured developmental screening tool, and a recent study reports that seventy-one percent of surveyed pediatricians almost always use clinical assessment without a developmental screening instrument (Sand et al. 2005). Similarly, case studies in the Healthy Kids suggest that Healthy Kids primary care providers report practicing "clinical assessment" most commonly and rarely use formal developmental screening ("The Los Angeles Healthy Kids Program Perseveres Amid Increasing Financial Strain: 3<sup>rd</sup> Case Study of Implementation," forthcoming).

***Improving Current Systems of Developmental Care within Primary Care Pediatrics.***

There are several key barriers to better developmental preventive care in practice as represented by regular monitoring of development and structured screening that are then used to prioritize health education topics for families. These include a lack of familiarity with the screening tools; the need to develop new clinical systems/protocols to administer and score screening tools, lack of referral resources if a developmental delay is identified, time constraints, lack of quality improvement support in preventive care topics and in areas of care that lack a Healthcare Effectiveness Data and Information Set (HEDIS) measure as part of National Committee on Quality Assurance (NCQA) accreditation of health plans and lack of adequate reimbursement. Although NCQA is considering a new developmental screening measure among other possible

candidate measures, current quality measures focus only on total well child encounters and have no process or outcomes. Health insurance payers typically do not recognize, reward, or allow separate billing for developmental care services so there are few incentives for adopting emerging recommendations in this area. Similarly there are few efforts to foster systems-level changes such as sponsoring quality improvement, support of information systems and tracking processes for primary care providers and cost offsets for primary care practices that administer standardized developmental screening tools. This evaluation's recent Healthy Kids case study interviews confirmed that although Healthy Kids does reimburse for developmental screening it was not designed to provide systems-level changes for providers that could support the implementation of standardized developmental screening tests.

In summary, the study shows that enrollment in Healthy Kids produced some modest improvements in developmental preventive care: a slight increase in eliciting parent concerns, and increased discussion of a small number of health education topics. This suggests that enrolling in Healthy Kids insurance product removes one barrier to developmental screening and health education while it does not remove other major barriers that persist in the pediatric primary care system. Given that Healthy Kids began as a health insurance program for young children and given the goals set in the First 5 LA strategic plan regarding improved health care and health status of young children in Los Angeles, these findings suggest some areas for improvement while recognizing that these improvements could be most effective in targeting primary care practices generally rather than targeting the Healthy Kids program specifically.

## **Limitations**

This study is limited by the fact that all data are self-reported from parents so that recall over a 6 month period may lead to inaccuracy of reporting. It should also be noted that 6 month recall applies to both baseline and follow-up surveys so that bias should not have resulted in the pre-post comparisons. The survey did not capture all developmental preventive services that children may have received while enrolled in Healthy Kids.

## **Conclusions**

Although enrollment in Healthy Kids is associated with changes in some measures developmental assessment/monitoring and anticipatory guidance, there was no change in the level of parental concern or providers' response to those developmental/behavioral concerns. This lack of change of content of care with enrollment in health insurance may reflect larger systems-level barriers to adequate developmental assessment/monitoring and anticipatory guidance within primary care practices with the majority of these barriers being inadequately addressed by enrollment in health insurance.

## **Appendix A: Questions to assess parental developmental concerns (adapted from PEDS)**

The next questions are about concerns you may have about your child. After I read each one, please tell me if you are concerned a lot, a little, or not at all.

Are you concerned a lot, a little, or not at all about . . .

- How (CHILD) talks and makes speech sounds?
- How (he/she) understands what you say?
- How (he/she) uses (his/her) hands and fingers to do things?
- How (he/she) uses (his/her) arms and legs?
- How (he/she) behaves?
- How (he/she) gets along with others?
- How (he/she) is learning to do things for (himself/herself)?
- Your child's feelings and moods?
- Whether your child can do what other children (his/her) age can do?

**Appendix B: Questions to assess the content of anticipatory guidance care provided by the clinician and the parents' preferences for anticipatory guidance topics  
(Adapted from Promoting Healthy Development Survey)**

During the past six months, did (CHILD)'s doctors or other health providers talk with you about:

- things you can do to help (CHILD) grow and learn?
- the kinds of behaviors you can expect to see in (CHILD) as (he/she) gets older?
- guidance and discipline techniques to use with (CHILD)?
- toilet training?
- how to make your house safe?
- the importance of reading with (CHILD)?
- issues related to child care?
- issues related to food and feeding (CHILD)?
- the words and phrases (CHILD) uses and understands?
- how (CHILD) is learning to get along with other children?
- dangerous situations, places and objects?

## References

- American Academy of Pediatrics, Committee on Children with Disabilities. 2001. "Developmental Surveillance and Screening of Infants and Young Children." *Pediatrics* 108(1): 192–95.
- American Academy of Pediatrics, Council on Children with Disabilities; Section on Developmental Behavioral Pediatrics; Bright Futures Steering Committee; Medical Home Initiatives for Children With Special Needs Project Advisory Committee. 2006. "Identifying Infants and Young Children with Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening." *Pediatrics* 118(1): 405–420.
- American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health. 1997. "Guidelines for Health Supervision III." Elk Grove Village, IL: American Academy of Pediatrics.
- Bethell, C., C. Peck, and E. Schor E. 2001. "Assessing Health System Provision of Well-Child Care: The Promoting Healthy Development Survey." *Pediatrics* 107:1084–94.
- Glascoc, F. P. 2002. "Collaborating with Parents: Using Parents' Evaluation of Developmental Status (PEDS) to Detect and Address Developmental and Behavioral Problems." Nashville, TN: Ellsworth & Vandermeer Press LLC. <http://www.pedstest.com>.
- . 2006. *Parents' Evaluation of Developmental Status*. Nashville, TN: Ellsworth & Vandermeer Press LLC. <http://www.pedstest.com>.
- Green, M., and J. S. Palfrey, eds. 2002. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, 2nd ed.. Arlington, VA: National Center for Education in Maternal and Child Health.
- Hill, I., L. Palmer, P. Barreto, E. Wada, and E. Castillo. 2008. "Parents' Opinions of the Los Angeles Healthy Kids Program Remain High Despite Recent Challenges Findings from the Second Evaluation Focus Groups." Washington, DC: The Urban Institute. <http://www.urban.org/url.cfm?ID=411796>.
- Howell, Embry M., Dana Hughes, Louise Palmer, Genevieve M. Kenney, Ariel Klein. 2008. "Final Report of the Evaluation of the San Mateo County Children's Health Initiative." Washington, DC: The Urban Institute. <http://www.urban.org/publications/411687.html>.
- Palfrey, J. S., J. D. Singer, D. K. Walker, and J. A. Butler. 1987. "Early Identification of Children's Special Needs: A Study in Five Metropolitan Communities." *Pediatrics* 111:651–59.
- Sand, N., M. Silverstein, F. P. Glascoe, V. B. Gupta, T. P. Tonniges, and K. G. O'Connor. 2005. "Pediatricians' Reported Practices regarding Developmental Screening: Do Guidelines Work? Do They Help?" *Pediatrics* 116:174–79.

U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. 2005. "The National Survey of Children's Health, 2003." Rockville, MD: U.S. Department of Health and Human Services. <http://www.mchb.hrsa.gov/thechild/index.htm>.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 2009. "Barriers to Developmental Screening According to Pediatricians: Results from AAP Surveys of Pediatricians." <http://www.cdc.gov/ncbddd/child/documents/DSbarriersrpt.pdf>.