

# Pediatricians' Practices and Attitudes Regarding Breastfeeding Promotion

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**ABSTRACT.** *Objective.* Public awareness of the benefits of breastfeeding is expected to increase during and after the national, federally funded Best Start Breastfeeding Promotion Campaign. It is anticipated that this will result in more breastfeeding-based interactions between families and pediatricians. The American Academy of Pediatrics conducted a survey of its members to identify their educational needs regarding breastfeeding to assist in the design of appropriate information programs.

*Method.* An eight-page, self-administered questionnaire was sent to 1602 active Fellows of the American Academy of Pediatrics.

*Results.* The response rate was 71%. Breastfeeding, as the exclusive feeding practice for the first month after birth, was recommended by only 65% of responding pediatricians; only 37% recommended breastfeeding for 1 year. A majority of pediatricians agreed with or had a neutral opinion about the statement that breastfeeding and formula-feeding are equally acceptable methods for feeding infants. Reasons given for not recommending breastfeeding included medical conditions with known treatments that did not preclude breastfeeding. The majority of pediatricians (72%) were unfamiliar with the contents of the Baby-Friendly Hospital Initiative. The majority of pediatricians had not attended a presentation on breastfeeding management in the previous 3 years; most said they wanted more education on breastfeeding management.

*Conclusion.* Pediatricians have significant educational needs in the area of breastfeeding management. *Pediatrics* 1999;103(3). URL: <http://www.pediatrics.org/cgi/content/full/103/3/e35>; *breastfeeding, education, pediatricians, survey.*

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ABBREVIATIONS. AAP, American Academy of Pediatrics; FAAP, Fellow of the American Academy of Pediatrics.

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The American Academy of Pediatrics (AAP) has long promoted breastfeeding as the optimal infant nutrition.<sup>1,2</sup> Most pediatricians agree on the importance of breastfeeding and support breastfeeding promotion activities.<sup>3,4</sup> However, many primary care physicians believe their training in breastfeeding management has been inadequate, and they lack confidence in their breastfeeding management abilities.<sup>4,5</sup> In addition, some hospital infant feeding practices may impede breastfeeding promotion.<sup>3,6,7</sup>

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All these factors contribute to less than optimal rates of initial and continuing breastfeeding.<sup>8</sup>

It is anticipated that breastfeeding awareness will increase nationwide as the federally funded Best Start Breastfeeding Promotion Campaign is launched.<sup>9</sup> This campaign is targeted initially at 10 states to raise public awareness of breastfeeding through pre- and postnatal parent counseling and media promotion. Increased public awareness is expected to increase breastfeeding-related interactions between families and physicians.

The AAP Division of Chapter Services and the Work Group on Breastfeeding of the Committee on Community Health Services initiated this survey of Fellows of the AAP (FAAP) to assess breastfeeding attitudes, knowledge, and management skills of pediatricians, as well as awareness of their hospitals' breastfeeding promotion activities. Results from this survey are expected to help in the design of appropriate breastfeeding education programs for physicians.

## METHODS

This was the 30th in a series of Periodic Surveys of Fellows conducted by the AAP. The eight-page, self-administered, forced-choice formatted questionnaire was mailed to 1602 randomly selected, active Fellows in the United States from July 1995 to November 1995. The response rate was 71%. Questions on hospital breastfeeding policies and demographics were to be answered by all survey recipients. Breastfeeding counseling questions were directed only to the respondents who indicated that they provided primary care to children from birth to 2 years of age.

For analysis purposes, respondents were grouped by gender, age (<45 and ≥45 years), and practice setting ("solo," single- or two-physician practices; "group," three or more physicians in the same practice or health maintenance organization practices; "clinic," practices based in medical schools, hospitals, clinics, or community health centers). For analysis of selected questions, pediatricians were subdivided based on whether any of their own children were breastfed ("breastfed exclusively or with formula supplement" vs "never breastfed") and whether they ever had children.

$\chi^2$  Tests were performed to compare responses by practice characteristics, gender, age, and personal breastfeeding experience. Analysis of variance with post hoc Fisher's least significant difference test was used to test for differences between groups. Not all respondents answered every question. To adjust for the large number of outcome variables, responses between groups were considered statistically significant at the  $P \leq .01$  level. Data are presented as proportion of respondents or mean  $\pm$  SD.

## RESULTS

### Characteristics of the Respondents

Characteristics of the respondents were consistent with those of previous Periodic Surveys, were representative of AAP membership at the time of the Survey, and reflected the ongoing increase in the proportion of AAP members who are female pediatricians and pediatric residents (Table 1). The majority of

**TABLE 1.** Characteristics of the Respondents (%)

Female gender ( <i>n</i> = 1122)	45
Age <45 years ( <i>n</i> = 1113)	63
Professional activity ( $\geq 1$ h per week) ( <i>n</i> = 1085)	
Direct patient care	94
Administration	44
Academic medicine	32
Research	16
Residency or fellowship training	22
Primary practice setting ( <i>n</i> = 1024)	
Solo	18
Group	38
Clinic	44
Description of practice area ( <i>n</i> = 1085)	
Urban, inner city	28
Urban, not inner city	30
Suburban	32
Rural	10

solo and group practice settings were located in suburban areas, whereas the majority of clinic practices were located in urban areas. The proportion of pediatricians reporting that all or almost all infants were breastfeeding differed significantly ( $P \leq .001$ ) over time and by practice setting. In solo and group practices, 73% of respondents reported breastfeeding at hospital discharge and 10% at 6 months, whereas in clinic settings, respondents reported only 28% breastfeeding at hospital discharge and 2% at 6 months.

Although 57% of pediatricians saw at least some of the parents of their patients younger than 2 years of age for a prenatal visit, the average proportion of parents seen for prenatal visits was only 11%. This proportion differed among practice settings (solo, 18%; group, 14% vs clinic, 4%;  $P < .01$ ). The first scheduled postnatal visit was  $10 \pm 6$  days (range, 1 to 60 days), which differed significantly among practice settings (solo,  $10 \pm 5$ ; group,  $9 \pm 6$ ; clinic,  $12 \pm 6$  days;  $P < .001$ ). Nearly all (93%) pediatricians discussed breastfeeding routinely during the prenatal visits.

### Breastfeeding Recommendations

When discussing infant feeding options for the first month with parents of healthy, full-term infants in their practice, 65% of pediatricians recommended breastfeeding exclusively, 20% made no recommendation, 13% recommended breastfeeding with formula supplementation, and 2% recommended exclusive formula feeding. Only 63% of all respondents made a specific recommendation on the duration of breastfeeding. Of these, 31% recommended breastfeeding for 6 months and 61% recommended breastfeeding for 1 year. The recommendation for  $\geq 1$  year was least likely made by pediatricians practicing in clinics (clinic, 50% vs other settings, 66%;  $P = .01$ ).

Pediatricians varied in their initial recommendations regarding breastfeeding after delivery. Only 44% recommended that the infant be put to the breast within a half-hour after delivery. More than half of respondents (59%) indicated that the infant should be fed on demand, whereas only 31% recommended the more appropriate nursing frequency of 8 to 12 times per day. In their initial hospital orders for breastfed infants, more than three fourths of pediatricians (78%) recommended that no water, glucose water, or formula be offered to the breastfed infant,

whereas 22% routinely recommended some form of supplementation. Rooming-in (keeping breastfed infants in the mother's room throughout the hospital stay, potentially to facilitate breastfeeding) was recommended by approximately half of respondents (51%).

Only one fourth of pediatricians (23%) advised against the use of pacifiers until breastfeeding was well established. More than two thirds of respondents (70%) made no specific recommendations regarding pacifier use. A large proportion of pediatrician respondents routinely recommended the introduction of semisolid foods (30%), iron (22%), and/or vitamins (41%) before 5 months of age to exclusively breastfeeding infants.

The Survey questioned reasons for not recommending or discontinuing breastfeeding (Table 2). Almost all pediatricians recommended against breastfeeding by mothers with known contraindications. However, a large proportion of respondents recommended against breastfeeding for situations where therapies exist that did not preclude breastfeeding. For example, 28% of respondents indicated that they would discontinue breastfeeding for breast and/or nipple problems.

### Breastfeeding Management in Office Practices

Because breastfeeding questions often are asked via telephone communication with pediatricians' offices, office management characteristics were assessed. The respondents indicated that the following people were responsible for answering telephone inquiries on breastfeeding: pediatricians, 76%; nurses, 73%; nurse practitioners, 26%; lactation consultants, 18%; and physician's assistants, 10%. Office personnel responsible for answering telephone questions regarding breastfeeding had varied training in breastfeeding management: informal training by physicians (64% respondents), reading articles and other literature (54%), attendance at lectures or workshops (39%), and attendance at presentations and discussions with lactation consultants (31%). Of the respondents, 27% noted that their staff either had no specific training or did not know what training their staff had in the area of breastfeeding management. In group practices, office nurses were more likely to handle the majority of breastfeeding ques-

**TABLE 2.** Reasons Pediatricians Recommend Mothers of Full-term Infants to Not Breastfeed or to Discontinue Breastfeeding (% Respondents)

Mother is HIV-infected or a drug abuser	91
Medications taken by mother may be harmful to infant	90
Mother opposes breastfeeding	58
Mother has breast infection (mastitis)	23
Mother has nipple problems	20
Mothers' milk supply seems inadequate	19
Infant's slow weight gain	17
Poor health of baby	13
Jaundiced infant	8
Mother is too young or immature	7
Mother has cracked nipples	6
Other*	<5

\* Inconvenience/time demands of breastfeeding, mother is employed outside of home, father's desire to participate in feedings, baby is teething, respondents' personal views towards breastfeeding.

tions (group, 82%; clinic, 71%; solo, 58%;  $P < .001$ , all differ from each other). Practice settings also differed in whether lactation consultants had a responsibility for breastfeeding management questions (clinic, 24%; group, 19% vs solo, 7%;  $P < .001$ ). A variety of lactation services were used by pediatricians (Table 3). When grouped by availability of any services, pediatricians practicing in clinic settings (clinic, 9% vs group, 1%; solo 5%;  $P < .001$ ) were least likely to have access to any lactation service listed.

### Physician Education

The type of education in breastfeeding management received by pediatrician respondents was examined. Approximately 58% of pediatricians had some education on breastfeeding management while in medical school or residency. Pediatricians who had received breastfeeding management education while in medical school or residency were more likely to be younger than age 45 years (<45 years, 71% vs  $\geq 45$  years, 33%;  $P < .001$ ) and female (female, 63% vs male, 53%;  $P < .01$ ).

Although less than half of the respondents (44%) had attended any Continuing Medical Education lecture or Grand Rounds during the previous 3 years that focused on breastfeeding management, during that time 90% had read articles on the subject in medical journals or books. Most of the respondents (86%) said they were interested in receiving additional education focusing on breastfeeding management. Pediatricians younger than age 45 expressed a greater interest in receiving additional education on the subject than did those 45 years and older (<45 years, 90% vs  $\geq 45$  years, 78%;  $P < .001$ ). Significantly more residents vs practitioners attended educational activities (93% vs 52%) and desired more education on breastfeeding (93% vs 84%, respectively;  $P < .001$ ).

In general, 77% of pediatricians said they were fairly confident (scoring 1 or 2 of 5, from very confident = 1 to not confident = 5) in their ability to manage common breastfeeding problems competently. Perceived respondent competency differed among practice settings (clinic, 63% vs group, 83%; solo, 85%;  $P < .001$ ). Respondents who attended any educational event that focused on breastfeeding management were significantly more confident in their abilities to manage common breastfeeding problems than those who did not attend such lectures ( $P < .001$ ). However, confidence was no greater in pediatricians who recalled any education in breastfeeding management in medical school. Those respondents indicating confidence in their abilities were more likely to have a large proportion of pa-

tients breastfeeding in their practices, but as evidenced by the questionnaire, the same respondents were not necessarily the most knowledgeable with respect to breastfeeding. Pediatricians' opinions on breastfeeding promotion and benefits were varied despite their general confidence in management issues (Table 4).

### Personal Experiences with Breastfeeding

Of all respondents, 60% had children who were breastfed, whereas the remainder either never had children or their children never breastfed. Pediatricians with personal experience (having breastfed children) differed from those with no personal experience in the reasons given for not recommending breastfeeding or discontinuing breastfeeding. Pediatricians with no personal breastfeeding experience were more likely not to recommend breastfeeding if the mother had breast or nipple problems (37% with no personal experience vs 22% with experience;  $P < .001$ ). Respondents with personal experience had differing opinions regarding the benefits of breastfeeding and other factors related to breastfeeding promotion than pediatricians with no personal experience (Table 4). The responses were similar for respondents with children who were not breastfed and those who never had children. Pediatricians with personal experience said they were more confident (87% said very confident) in their ability to manage common breastfeeding problems than were pediatricians without personal experience (67%, very confident;  $P < .001$ ).

### Hospital Policies Regarding Breastfeeding

When questioned about the global policy to promote successful breastfeeding, 72% of pediatricians were not at all familiar with the contents of the Baby-Friendly Hospital Initiative, or the Ten Steps to Successful Breastfeeding statement.<sup>6,7,10</sup> The majority of pediatricians (82%) did not know if the main hospital with which they were affiliated had applied to be a Baby-Friendly Hospital. A written hospital policy regarding breastfeeding is central to the Ten Steps program. Nearly half of pediatricians (46%) did not know if the main hospital with which they are affiliated had such a written policy. Pediatricians practicing in clinic settings (57%) more frequently were unaware of their hospital's policy compared with those in other settings (35%),  $P < .001$ . Fifty percent of pediatricians  $\geq 45$  years knew their hospital policy compared with 32% of pediatricians < 45 years,  $P < .001$ . A summary of the Survey data were used for comparison with the recommendations of the Ten Steps program (Table 5). For eight of the Steps where data were comparable, pediatricians' compliance rates generally were low.

## DISCUSSION

The American Academy of Pediatrics' recommendation for breastfeeding is based on abundant data, including studies conducted within the United States, that suggest profound benefits of breastfeeding for infants and mothers.<sup>2,11,12</sup> A national effort sponsored by the US Department of Health and Human Services, Maternal and Child Health Bureau,

**TABLE 3.** Lactation Services Provided or Referred to Breastfeeding Mothers by Pediatric Offices (% of Practices,  $n = 780$ )

	Service Used	Service Unknown and/or Unavailable
Lactation consultants	74	8
Rental of supplies and equipment	68	11
Hospital-based lactation center	58	21
Breastfeeding support groups	47	21
Breastfeeding "hot-line"	27	33



**TABLE 4.** Pediatricians' Opinions on Issues Involving Breastfeeding Promotion and Benefits Based on Pediatricians' Personal Experience With Breastfeeding

	Personal Experience ( <i>n</i> = 657)	No Personal Experience* ( <i>n</i> = 435)
Almost any mother can be successful at breastfeeding if she keeps trying**		
Agree	75	60
Disagree	14	21
Breastfeeding and formula-feeding are equally acceptable methods for feeding infants**		
Agree	40	53
Disagree	44	28
Formula-feeding is more reliable and easier for both the mother and the baby**		
Agree	9	15
Disagree	76	57
The benefits of breastfeeding outweigh any difficulties/inconveniences mothers may encounter**		
Agree	74	62
Disagree	12	19
In the long run, formula-fed babies are just as healthy as breastfed babies**		
Agree	31	39
Disagree	43	32

\* Data for respondents with no personal experience with breastfeeding include those who never had children and those whose children never breastfed. The data for both subgroups were similar and the results combined. Scale of responses 1 to 5 was used; Agree = 1 + 2, disagree = 4 + 5. Neutral responses are not presented.

\*\* *P* < .01.

**TABLE 5.** How Pediatricians' Advice and the Policies of Their Hospitals Comply with the US Baby-Friendly Hospital Initiative

	% Compliance
Maintain written hospital policy that is available to all staff	38
Train all health care staff to follow policy	N/A
Inform pregnant women about breastfeeding so they can make an informed decision	11
Breastfed within 1 hour of delivery	44
Demonstrate proper breastfeeding to mothers	N/A
Give nothing but breast milk unless medically indicated	79
Rooming-in 24 hours per day	51
Unrestricted breastfeeding	36
No pacifiers in hospital	23
Establish support groups for parents within the community	47

N/A indicates data not requested in or derived from Periodic Survey.

and the US Department of Agriculture is under way to promote breastfeeding, especially among low-income women. The Best Start Breastfeeding Promotion Campaign will increase public awareness of the benefits of breastfeeding.<sup>9,13</sup> The pediatric community can be expected to field inquiries from mothers who see promotional materials. It is expected that this effort will further increase the pediatrician's responsibility for breastfeeding management.<sup>14</sup>

This Periodic Survey of a large sample of practicing pediatricians reveals that although a majority of respondents recommend breastfeeding, a distinct proportion of pediatricians do not do so along current guidelines. A majority of pediatricians believe that breastfeeding and formula-feeding are equally acceptable methods for feeding infants. Furthermore, reasons given for not recommending breastfeeding include medical conditions such as mastitis, nipple problems, low milk supply, jaundice, and low weight gain, which have recognized therapeutic approaches that generally do not preclude breastfeeding.<sup>5,15,16</sup>

These data suggest that the lack of clear recommendations may lead to confusion when parents question physicians about breastfeeding.

The Survey was a random sample obtained from a pool of the 42 000 FAAP. Seventy-five percent of board certified pediatricians are FAAP. The distribution of the sample appears to reflect AAP membership and represents a large proportion of practicing pediatricians. The Survey reflects the opinions of respondents who were sufficiently interested in breastfeeding to complete the questionnaire. Thus, even in this population of "interested" respondents, their knowledge gaps are profound, and their less than positive attitude is noteworthy.

The Survey indicates that breastfeeding attitudes and management issues have not changed substantially from earlier studies.<sup>3</sup> Of concern is that pediatricians now are likely to recommend semi-solid foods, iron, and vitamins before 5 months of age, and to recommend supplementary feedings and pacifiers in the first few days after delivery. These infant feeding practices are known to impede successful breastfeeding and may be unnecessary.<sup>7,16-18</sup> Although pediatricians' recommendations for feeding have changed over time, not all are in the direction recommended by the AAP.<sup>1,2</sup>

The prenatal visit often is cited as a major resource for counseling parents on the benefits of breastfeeding. However, few parents were seen for prenatal visits by pediatricians. Unfortunately, this small proportion of pediatric prenatal visits precludes that vehicle from becoming a major influence in the choice of feeding practice. Perhaps counseling during early obstetric visits would be more beneficial in affecting parental choice of feeding. Alternatively, educational programs to target the adolescent population could be encouraged by pediatricians to impact the decision to breast feed.

The results of this Survey were examined in comparison with the recommendations of the Baby-Friendly Hospital Initiative. The majority of pediatri-

cians surveyed were unfamiliar with the contents of the Initiative and generally had low rates of compliance with the Ten Steps. The low physician compliance rates reflect the Survey outcome. For hospitals to become Baby-Friendly, pediatricians will have to become involved in the process. To do this, a sound knowledge base and positive attitude will be important.

The Best Start Campaign is targeted to clinic populations. The Survey indicates that the need for education and guidance is most critical among pediatricians practicing in clinic settings. Respondents practicing in clinic settings had the fewest prenatal visits, the lowest rate and duration of breastfeeding, were the least likely to recommend breastfeeding, and reported the longest period of time before the first postnatal visit. It is known that enthusiastic support and knowledgeable guidance will increase breastfeeding initiation and duration in the clinic population and reduce the economic burdens of health care.<sup>19-21</sup> Therefore, educational programs should be targeted to health care professionals practicing in clinic settings.

The Survey also examined the role of personal experience in breastfeeding, and found that pediatricians with any personal experience were more informed and confident in their management abilities. Personal experience is a known predictor of confidence in breastfeeding.<sup>4</sup> This suggests that educational programs also be targeted to professionals to effect changes in their personal behavior. For example, hospitals and physician's offices should adopt a "breastfeeding friendly" atmosphere to allow professionals to experience breastfeeding while at work or in school.

The knowledge gap identified in this Survey has been noted by others, even though pediatricians responding to this Survey had slightly more training in breastfeeding during residency or medical school than that cited previously.<sup>4,5,22</sup> Among resident physicians receiving a greater education in breastfeeding, the desire for further education was strong. A majority of respondents, however, had not attended a presentation on breastfeeding management in the prior 3 years. However, those who attended educational sessions rated themselves as more confident in their ability to manage breastfeeding problems, and had a greater proportion of patients breastfeeding in their practices. Although pediatricians have significant needs in regard to knowledge of breastfeeding management, the Survey suggests that educational sessions have been helpful and that the vast majority of respondents want more instructional opportunities.

New programs are emerging to assist the pediatrician in gaining more knowledge about breastfeeding. The AAP has produced a policy statement<sup>2</sup> and is developing a practice parameter on breastfeeding. More physician continuing education programs are offered by national and regional organizations, including the AAP.<sup>14</sup> The newly formed Academy of Breastfeeding Medicine has been successful as an advocate for the physician's role in breastfeeding. Annual meetings of this new organization and forums at the Pediatric Academic Societies' meeting are available to expand physicians' knowledge in this multidisciplinary field. Materials and training courses from groups, such as Wellstart International,

are available for the education of all health care professionals. Therefore, we anticipate that pediatricians' knowledge will increase, and attitudes toward breastfeeding will become more positive.

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