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Primary Care Physician Experience with Children with Oral Clefts in Three States

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Abstract

BACKGROUND: The experience of primary care physicians in Arkansas, Iowa, and New York treating children with oral clefts (OCs) was investigated, along with their knowledge and comfort caring for or referring these children.

METHODS: A mail survey was conducted with all primary care physicians in Iowa and Arkansas, and a random sample of 4000 physicians in New York, selected from the American Medical Association (AMA) Master File. The final dataset consisted of 1435 usable surveys. Outcome measures were experience and comfort providing care to or referring children with OC. Differences between states were tested using Pearson or Kruskal-Wallis chi-square tests, or F-tests for differences in means.

RESULTS: Two-thirds of respondents had provided care to a child with an OC since completing residency. Physicians were most comfortable providing routine care and much less comfortable providing counseling on cleft-related issues. Eighty percent had an organized cleft team to which they could refer. About two-thirds were very comfortable with the expertise available for surgical

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care, speech, and hearing; half were for dental care; only 40% were for behavioral or emotional counseling. Two-thirds were interested in continuing medical education (CME) on cleft care.

CONCLUSIONS: Primary care physicians in all three states had little experience with children with OCs. This limited experience poses significant barriers to care. Increased experience during training and CME opportunities could improve knowledge and comfort with providing OC-related care. Increasing knowledge of referral options for team care and other cleft-related services could also help physicians when caring for children with OCs. *Birth Defects Research (Part A)* 88:1050–1056, 2010.

Keywords

oral clefts; primary care physicians

INTRODUCTION

There is much discussion in the literature and among clinicians about the most appropriate setting for the provision of care for children with a cleft lip, cleft palate, or cleft lip with palate (referred to in this study collectively as oral clefts or OCs; Noar, 1992; Robin et al., 2006). Although there is no consensus, The American Cleft Palate-Craniofacial Association recommends that the majority of cleft-related care should be provided by an organized cleft team that can offer multi-disciplinary assistance to a family at a single visit (American Cleft Palate-Craniofacial Association, 2007). Less attention has been paid, however, to other aspects of care for a child with an OC, especially that provided by primary care physicians in the child's community. This study evaluated the experience of community-based primary care physicians in Arkansas, Iowa, and New York with providing care to children with OCs, and their comfort with providing such care or locating a referral for services.

Organized cleft and craniofacial teams, by definition, provide OC-related medical, dental, and behavioral/emotional care for children and families at a single location (Noar, 1992; Strauss, 1998; Thomas, 2000; Robin et al., 2006; American Cleft Palate-Craniofacial Association, 2007). Many families, however, have to drive great distances to see an organized cleft team. Routine and preventive care, or intermittent OC-related care, must, therefore, be provided by physicians in the child's community, who may also have to address ongoing cleft-related concerns, such as feeding issues (Thomas, 2000; Nackashi et al., 2002). Community-based physicians are even more important for coordinating care for children not initially seen by a cleft team to ensure they are receiving the ageappropriate follow-up assessments and treatment. These primary care physicians must understand the physical and behavioral/emotional sequelae of OCs and determine when interventions or referrals are necessary. Further complicating this issue is that although OCs are one of the most common birth defects in the United States, with prevalence estimates for nonsyndromic clefts of 1.7 per 1000 live births, the occurrence is still relatively infrequent (Centers for Disease Control and Prevention, 2006). As a result, many physicians may only rarely see a child with an OC in their practice.

To date, few studies have evaluated the knowledge and experience of primary care physicians regarding the physical, dental, and behavioral/emotional needs of a child with an

OC (Yetter, 1992; Mitchell and Wood, 2000; Grow and Lehman, 2002; Falk and Robin, 2004). The relative rarity of OCs in primary care physician practices was noted in a study of primary care physicians in a sixcounty region of Ohio that surrounded the location of a cleft team (Grow and Lehman, 2002). The study found that only one-half of the physicians had a child with an OC in their practice at the time of the survey, and over three-quarters of these physicians were treating three or less children with OCs. One-quarter of these physicians had not treated a child with an OC in over five years.

This study of community-based primary care physicians in Arkansas, Iowa, and New York investigated the experience of these physicians with OCs both in their training and in their practice, and their knowledge and comfort in caring for or referring children with OCs for a variety of conditions.

METHODS

A mailed survey was conducted with primary care physicians in Iowa, New York, and Arkansas in the spring of 2007 (see Supporting Information online). The sample was selected from the American Medical Association (AMA) Master File list of all licensed physicians currently practicing in each state. Physicians were defined as being in primary care if their self-reported area of practice was general/family practice or pediatrics. Because the focus of this research was community-based primary care, physicians whose practices were identified as primarily academic or hospital-based were not eligible for the study. In both Iowa and Arkansas, all general/family practitioners and pediatricians in the state were included in the study (Iowa, $n = 1483$; Arkansas, $n = 1303$). In New York, a simple random sample of 3651 pediatricians and general/family practitioners was drawn from the 7918 primary care physicians in the state, as the costs involved in surveying all physicians in New York was prohibitive.

The four-page, 28-item questionnaire consisted mainly of closed-ended questions on a range of issues to explore and describe physicians' experience and comfort with providing primary care to children with OCs, and several questions regarding practice characteristics. An initial survey and cover letter were mailed in March 2007, using a modified Dillman approach (Dillman, 2000). The initial mailing was followed by a reminder card after about 10 days. Approximately two weeks later, a second survey and cover letter were mailed to all nonrespondents. As response rates to the mail survey were lower than anticipated, we added a fax follow-up version of the questionnaire, which was the stated preference of a sample of nonrespondents. Institutional review boards at the University of Iowa, the University of Arkansas for Medical Sciences, and the New York State Department of Health approved the research protocol.

Basic demographic information about the physicians was collected both from the survey and from the AMA list of licensed physicians. The urban-rural variable in this study was defined using the county level continuum code developed by the United States Department of Agriculture, collapsed into four categories: metro, urban near metro, urban far from metro, and rural (Measuring rurality, 2003). Regarding experience with caring for children with OCs, questions asked whether and how long ago the physician had provided care for a child

with an OC since completing residency training. Physicians who had never cared for a child with an OC in their practice or had not done so within the last two years were directed to skip the cleft-related care items and proceed directly to more general practice questions. Those who had cared for a child with an OC within the previous two years were asked to rate their comfort level with providing various primary care services to these patients. They were also asked to rate how comfortable they were with providing referrals for various cleft-related services (e.g., dental care, and speech therapy) with regard to both the expertise available and whether the child would have been seen in a timely manner. “Comfort level” was rated using a four-point scale (very comfortable, somewhat comfortable, mildly comfortable, or not very comfortable), with a “Not Sure” response option. Respondents also rated the extent (not at all, a little, somewhat, a lot) to which they saw each of several issues (e.g., distance, and cost) as barriers to appropriate care for children with OC. These items also included a “Not Sure” response option.

Analyses included tabulation and descriptive comparisons of survey results for physicians from Arkansas, Iowa, and New York. Differences between the three states were tested for statistical significance using Pearson chi-square tests, Kruskal-Wallis chi-square tests, or F-tests for differences in means. Differences were considered statistically significant if the p value was < 0.05 .

RESULTS

Response Rates

Response rates to the mailed survey were 25% in Iowa, 24% in New York, and 10% in Arkansas, for a combined rate of 21% (1354 of the 6434 eligible physicians completed and returned the mailed questionnaire). Of the 5080 non respondents, 88 declined participation, 23 returned a questionnaire that was not usable because none of the key items were completed, and 4969 were not returned. Of those not returned, a fax number was identified for 2810 (57%), and a questionnaire was faxed to these numbers. Eighty-one usable fax surveys were returned, which increased overall response rates by about 1% in each state. Final response rates were 26% for Iowa, 25% for New York, and 11% for Arkansas. The final dataset consisted of 1435 usable cases (387 in Iowa, 909 in New York, and 139 in Arkansas) with 94% mail and 6% fax responses. The three states did not differ significantly in the proportion of surveys collected by mail versus fax. While this response rate was lower than expected, it does reflect the current downward trend in survey response rates among physicians (Cull et al., 2005). For example, a recent survey on adoption of electronic health records, which was conducted using nearly identical methods, had a 17.2% completion rate (Bramble et al., 2010).

Nonresponse bias tests indicated that respondents ($n = 1435$) were similar in age to non respondents. Pediatricians were more likely to respond to the survey than were family/general practitioners (30 vs. 18%) and female physicians had a higher response rate than males (27 vs. 20%). Within each state, non-metropolitan counties had somewhat higher response rates than metro areas (Arkansas: 14 vs. 9%; Iowa: 31 vs. 23%; New York: 32 vs. 25%; all statistically significant at $p < 0.05$). The metro/non-metro effect was smaller, but still statistically significant, when all three states were combined (25 vs. 22%; $p = 0.048$).

While we recognize the low response rate as a limitation of this study, we contend that the gap in the literature on this topic is significant enough to justify analysis of the data collected.

Demographic Characteristics

The demographic characteristics of responding physicians by state are shown in Table 1. New York respondents were practicing predominantly in metro areas, were most likely to be pediatricians, older, most likely to be working part-time, and more likely to be female than the other states. Iowa physicians were most likely to be in general/family practice and most likely to be in a network or a hospital based employee. In comparison, Arkansas physicians were most likely to be in an ownership role in the practice.

Experience with Oral Clefts in Practice

About two-thirds of primary care physicians had provided care to at least one child with an OC since completing their residency, and about one-half of these had done so within the last two years (Table 2). New York physicians were least likely to have provided care to a child with an OC. For those who had seen a child with an OC, one in three physicians had provided care to such a child in the previous six months, with Arkansas physicians being most likely to have seen a child with this condition recently. Of the physicians in Iowa who had cared for a child with an OC since residency, about one-half had not seen one for over two years. Overall, the vast majority of physicians who provided care to a child with an OC in the last two years had provided both well-child care and sick-child care. Over one-half of the respondents had provided care for frequent ear infections, and 45% for feeding assistance. About one in five physicians provided some level of behavioral or emotional care.

Physicians were asked about their comfort providing routine and OC-related care to children with OCs (Table 3). Overall, physicians were most comfortable providing well-child care to children with OCs, followed by routine sick care. Significantly fewer physicians were very comfortable providing counseling for either non-surgical cleft care or for behavioral or emotional issues of the child or family.

Referral Issues

Among physicians who had seen a child with an OC in the last two years, three-quarters had referred a child for OC-related surgical care. Slightly less than one-half of physicians had referred a child for feeding assistance, frequent ear infections, or speech therapy. Nearly 80% of physicians had an organized cleft team to which they could provide a referral. One-third of physicians had referred a child with an OC for dental care, one-quarter for genetic counseling or hearing problems, and 8% for a behavioral or emotional problem in the past two years.

Overall, about two-thirds of physicians were very comfortable with the expertise available when referring a child for OC-related conditions such as surgical care, speech, and hearing (Table 4). About one-half were comfortable referring a child for dental care, and 40% for behavioral or emotional counseling. Statistically significant differences by state were

identified for cleft-related non-surgical care, speech therapy, and behavioral or emotional counseling for the child and family, with New York physicians indicating lower comfort levels in each instance.

With the exception of referrals for surgical care, physicians were less comfortable with how quickly they would be able to get a child/family in for a referred visit (Table 5). Two-thirds of the physicians were very comfortable with the timeliness of care following a referral for surgical care; over one-half were very comfortable with wait times for hearing services and speech therapy. Less than one-half of the physicians were very comfortable with timeliness of care for the other issues (only 30% were very comfortable with how quickly a patient or family would be seen for behavioral or emotional care following a referral). Arkansas physicians were least likely to be very comfortable with how quickly a child would receive dental services after a referral (40%, compared to 54% in Iowa, and 48% in New York) but this difference was not statistically significant at $p < 0.05$.

Training and Continuing Education Issues

One in four primary care physicians never experienced providing care for a child with an OC during their training (Table 6). One-third had provided care for a child with an OC during medical school, and over one-half had during their residency. One-quarter provided care for a child with an OC during both medical school and residency. There were some differences by state, with physicians in Arkansas being most likely to have had this experience during medical school and those in Iowa least likely during their residency. Over one-half of all physicians indicated that they did not have enough clinical or didactic experience concerning care for children with OCs during their training. Arkansas physicians were most likely to indicate having had experience providing care to children with OCs during at least one phase of their training (70%, compared to 56% in Iowa, and 65% in New York), and they were also the most likely to indicate their training did not include enough didactic experience with OCs.

Thirty-two percent of providers had previously participated in at least one CME course that related to some aspect of cleft care. Sixty-two percent, however, reported being interested in receiving future continuing education classes on a variety of OC-related topics.

DISCUSSION

In general, community-based primary care physicians in all three states indicated they had little experience with providing care to children with OCs, with some variation by state. Only two-thirds of the physicians had ever provided care to a child with an OC and only one third had seen a child with an OC in the last six months. Most who had treated a child with an OC had only seen one or two in the previous two years.

This low prevalence of OCs in the practices of individual primary care physicians indicates a significant challenge for the consistent care of children with OCs. For children who do not receive team care, the community based, primary care physician (and other members of the practice) must often play the role of care coordinator to be sure that the services that would otherwise be provided by the cleft team (e.g., speech, dental, and behavioral/emotional care)

reach the affected child and family. For the children who are cared for by a cleft team, there will be ongoing issues, such as feeding problems for young children, and emotional and dental issues for teens that will need attention by the primary care physician in between visits to the cleft team. Thus, the obvious challenge is to keep primary care physicians current and comfortable with OC care-related issues for the occasional patient they encounter. Not surprisingly, primary care physicians were most comfortable providing the services that were most similar to those they provide to other children in their practice (well-child and sick-child care) and least comfortable with services specific to children with OCs (in addition to behavioral and emotional care for children and their families).

The next most appropriate option for a physician providing OC-related services in their practice is referring children to specialists or providers more familiar with cleft-specific care. However, about one in six doctors did not know of an organized cleft team to which they could refer, even though in Iowa, for example, about three quarters of children with OCs are cared for by a cleft team (Damiano et al., 2006). Also, less than two-thirds were “very comfortable” with the expertise to which they could refer patients for dental care; less than one half were “very comfortable” with their referral options for the emotional counseling of children and families (services that should be available through a cleft team). Other challenges for referring children with OCs were noted. For example, comfort with the timeliness of a referral was lower for all service types than comfort with the quality of those to whom they could refer, a potential indicator of access to care barriers for children with OCs.

The primary strength of this study is that it is one of the only published articles presenting a broad perspective of the experiences of primary care physicians with children with OCs. Primary care providers play an extremely important role in the care of these children once they leave the hospital or the care of a cleft team. However, little research has been conducted on their experience and comfort level with cleft-related care. State-level data regarding primary care physicians and clefts is also rare, thus our analysis adds to our knowledge of this issue as well.

The logical policy implications from these results relate to educational opportunities for primary care physicians and coordination with cleft teams. The most obvious educational opportunity for increasing the knowledge and experience of primary care physicians with children with OCs is during medical school and residencies, when the encounters are most controlled. Among the physicians participating in our study, about one in four did not recall receiving any training concerning care for children with OCs, and over half indicated that they did not receive enough clinical or didactic experience. Although recall may have been an issue with the specific responses, there was a general perception that the amount of exposure to cleft-related issues during physician training could be improved.

For those in practice, increasing the availability of CME is also an option for improving the comfort of primary care physicians with cleft-related care, since almost two-thirds reported being interested in receiving this type of CME. Such CME could be either a dedicated course or a portion of a broader CME course on pediatric issues, which might attract more interest. The American Cleft Palate-Craniofacial Association offers CME at its annual

meetings. The relationship between stated interest in CME in OCs and these courses, however, is hypothetical and may not translate to actual selection of course type by primary care physicians.

Regarding team care, these results are likely influenced, positively or negatively, by the number and location of organized cleft and craniofacial teams in each state. There are two cleft teams in Iowa and Arkansas and 15 in New York. One could hypothesize that this relatively small number of cleft teams might lead to one in six not knowing about their availability. On the other hand, in states like Iowa and Arkansas, where the primary cleft team is at the state's major academic health center, one might expect most practitioners to be aware of its existence. While expanding the availability of cleft teams is challenging, communicating more effectively about the services available and the process for referral may go a long way toward assisting primary care providers in accessing a valuable patient resource.

There were a number of limitations to this study, and thus the results should be interpreted carefully. First and most significant was the low response rate to the written survey by physicians. Because we were aware of the challenges in getting physicians to respond when we began the study, we tried the following methods for improving response rates: sending the survey from a known entity in each state, using first-class postage, keeping the survey instrument to four pages, personalizing cover letters, and doing multiple follow-ups (VanGeest et al., 2007). When responses were lower than expected, we called selected non-responding physicians to determine why the survey had not been completed, and added a fax follow-up to the planned mailings at the suggestion of these practices. We hypothesized that the low response rate may be due in part to the infrequency of occurrence of OCs and the resulting lower level of interest/experience among physicians. Thus, if there was a response bias, it may have been toward practices with OC experience, making our results about experience with OCs more conservative (which could be even less than reported here). In addition, the study suffers from the limitations inherent in survey research, including whether our results would apply to physicians nationwide, in addition to variation in respondents' interpretation of the questions.

Future research should focus on ways to more effectively educate students and practitioners about relatively low incident conditions. Better understanding about how to reach practitioners with traditional CME is important, including getting practitioners to not only indicate a willingness to learn but actually select these topics for CME courses. Greater exploration of the use of technological approaches for making seldom-used information more available could expand our current educational approaches. Coordination of filtered websites is already underway, but expanding options to include tools such as smartphone/computer tablet applications, could make OC care-related information more accessible as well as information for many other relatively infrequent conditions.

In summary, this study is one of the first to report on the experience, knowledge, and attitudes of community based primary care physicians concerning care for children with OCs, especially combining data from multiple states. The limited experience of these physicians with providing care to children with OCs poses significant barriers to care in that

physicians may not screen for or identify problems common to children with clefts, and, therefore, not make the necessary referrals. Increased experience during training and CME opportunities could help improve their knowledge and comfort with providing OC-related care. Increasing knowledge of referral options for team care and other cleft-related services could also help physicians feel less isolated in the community when caring for children with OC.

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Table 1**Demographic Characteristics of Primary Care Physician Respondents**

Physician characteristic	Arkansas (n = 139)	Low (n=387)	New York (n = 909)	Total (n = 1435)
Specialty (n = 1435) ***				
Family/general practice	80 (58%)	298 (77%)	327 (36%)	705 (49%)
Pediatrics	59 (42%)	89 (23%)	582 (64%)	733 (51%)
Age (n = 1435, mean = 50; SD = 11) **				
<40	40 (29%)	77 (20%)	179 (20%)	296 (21%)
40–49	41 (30%)	111 (29%)	258 (28%)	410 (29%)
50–59	42 (30%)	141 (36%)	259 (28%)	442 (31%)
60–69	11 (8%)	51 (13%)	153 (17%)	215 (15%)
>70	5 (4%)	7 (2%)	60 (7%)	72 (5%)
Working status (n = 1410) ***				
Part-time	14 (10%)	36 (9%)	156 (18%)	206 (15%)
Full-time	124 (90%)	347 (91%)	733 (82%)	1204 (85%)
Practice type (n = 1415) ***				
Solo practice	33 (24%)	31 (8%)	258 (29%)	323 (23%)
Partner/owner in group	55 (40%)	112 (29%)	231 (26%)	398 (28%)
Employee: group practice	31 (22%)	119 (31%)	193 (22%)	343 (24%)
Employee: network or hospital	19 (14%)	114 (30%)	183 (20%)	316 (22%)
Other	1 (1%)	6 (2%)	29 (3%)	36 (3%)
Sex (n = 1435) ***				
Female	52 (37%)	142 (37%)	438 (48%)	632 (44%)
Male	87 (63%)	245 (63%)	471 (52%)	803 (56%)
Urban/rural (n = 1435) ***				
Metro	71 (51%)	196 (51%)	836 (92%)	1103 (77%)
Urban near metro	31 (22%)	67 (17%)	54 (6%)	152 (11%)
Urban far from metro	31 (22%)	104 (27%)	19 (2%)	154 (11%)
Rural	6 (4%)	20 (5%)	0 (0%)	26 (2%)
New patients (n = 1400) *				
Accept all new patients	90 (66%)	230 (61%)	590 (67%)	910 (65%)
Accept some new patients	45 (33%)	126 (33%)	236 (27%)	407 (29%)
Accept no new patients	2 (1%)	23 (6%)	58 (7%)	83 (6%)

*
 $p < 0.05$.**
 $p < 0.005$.***
 $p < 0.001$.

Table 2**Primary Care Physician Experience with Children with Oral Clefts in Practice**

Cleft care experience	Arkansas (n = 139)	Lowa (n=387)	New York (n = 909)	Total (n = 1435)
Ever provided care since residency (n = 1435) **				
Yes	104 (75%)	287 (74%)	558 (61%)	949 (66%)
No	35 (25%)	100 (26%)	351 (39%)	486 (34%)
Last time provided care (n = 949) *				
<6 months ago	47 (45%)	90 (31%)	190 (34%)	327 (35%)
6–12 months ago	11 (11%)	28 (10%)	61 (11%)	100 (11%)
12–24 months ago	13 (13%)	18 (6%)	60 (11%)	91 (10%)
>2 years ago	33 (32%)	150 (52%)	247 (44%)	430 (45%)
Number cared for in past 2 years (n = 511) †				
1	20 (28%)	41 (31%)	102 (37%)	163 (32%)
2	21 (30%)	54 (40%)	121 (40%)	196 (38%)
3	12 (17%)	16 (12%)	42 (14%)	70 (14%)
4	8 (11%)	17 (13%)	23 (8%)	48 (9%)
5–9	9 (13%)	6 (4%)	17 (6%)	32 (6%)
10+	1 (1%)	1 (1%)	0 (0%)	2 (0.4%)
Type of care provided past 2 years (n = 519)				
Well-child care	62 (89%)	122 (89%)	280 (92%)	464 (90%)
Sick-child care	65 (93%)	122 (89%)	267 (87%)	468 (89%)
Frequent ear infections	45 (63%)	83 (61%)	166 (53%)	294 (57%)
Behavioral/emotional	16 (23%)	26 (19%)	69 (22%)	111 (21%)
Feeding assistance	36 (51%)	58 (42%)	137 (45%)	231 (45%)

*
 $p < 0.005$.**
 $p < 0.001$.†
 $p < 0.10$.

Table 3**Primary Care Physician Comfort Treating Children with Oral Clefts^a**

Statement	Very comfortable (1)	Somewhat comfortable (2)	Mildly comfortable (3)	Not very comfortable (4)	Not sure (5)^b
Well-child care (n = 510)	422 (83%)	78 (15%)	8 (2%)	2 (0.4%)	0 (0%)
Routine sick care (n = 510)	417 (82%)	80 (16%)	11 (2%)	2 (0.4%)	0 (0%)
Counseling parents for oral cleft-related non-surgical care such as feeding problems, reflux, or failure to thrive (n = 510) [†]	166 (33%)	199 (39%)	92 (18%)	52 (10%)	1 (0.2%)
Behavioral or emotional counseling for the child (n = 506)	247 (41%)	175 (29%)	88 (15%)	48 (8%)	41 (7%)
Emotional counseling for the family (n = 508)	245 (41%)	175 (29%)	87 (14%)	50 (8%)	45 (7%)

^aOnly physicians who had seen a child with an oral cleft in the previous two years were asked to respond to these questions.

^b“Not sure” responses not included in significance tests.

[†] $p < 0.10$, NY physicians more comfortable.

Table 4

Primary Care Physicians' Comfort Level with Expertise Available for Referrals

Statement	Very comfortable (1)	Somewhat comfortable (2)	Mildly comfortable (3)	Not very comfortable (4)	Not sure (5) ^a
Cleft-related non-surgical care such as feeding problems, reflux, or failure to thrive (n = 508) ^{**}	315 (62%)	124 (24%)	37 (7%)	17 (3%)	15 (3%)
Cleft-related surgical care (n = 509)	376 (74%)	75 (15%)	24 (5%)	22 (4%)	12 (2%)
Dental care (n = 507) [†]	293 (58%)	123 (24%)	46 (9%)	27 (5%)	18 (4%)
Behavioral or emotional counseling for the child (n = 507) [*]	217 (43%)	154 (30%)	77 (15%)	39 (8%)	20 (4%)
Emotional counseling for the family (n = 509) [*]	213 (42%)	155 (30%)	77 (15%)	41 (8%)	23 (5%)
Speech therapy (n = 509) [*]	334 (66%)	123 (24%)	27 (5%)	11 (2%)	14 (3%)
Hearing care (n = 510)	346 (68%)	111 (22%)	25 (5%)	15 (3%)	13 (3%)
Genetic counseling (n = 508) [†]	326 (64%)	102 (20%)	31 (6%)	31 (6%)	18 (4%)

^a "Not sure" responses not included in significance tests.^{*} $p < 0.05$, with New York indicating less comfort with available expertise than Iowa and Arkansas.^{**} $p < 0.01$, with New York indicating less comfort with available expertise than Iowa and Arkansas.[†] $p < 0.10$, with New York indicating less comfort with available expertise than Iowa and Arkansas.

Table 5

Primary Care Physicians' Comfort with Timeliness of Referrals

Types of referral to or for	Very comfortable (1)	Somewhat comfortable (2)	Mildly comfortable (3)	Not very comfortable (4)	Not sure (5) ^a
Cleft-related non-surgical care such as feeding problems, reflux, or failure to thrive (n = 508)	237 (47%)	176 (35%)	41 (8%)	23 (5%)	31 (6%)
Cleft-related surgical care (n = 509)	335 (66%)	102 (20%)	32 (6%)	13 (3%)	27 (5%)
Dental care (n = 508) [†]	225 (44%)	155 (31%)	60 (12%)	28 (6%)	40 (8%)
Behavioral or emotional counseling for the child (n = 508)	152 (30%)	148 (29%)	102 (20%)	61 (12%)	45 (9%)
Emotional counseling for the family (n = 508)	153 (30%)	152 (30%)	94 (19%)	63 (12%)	46 (9%)
Speech therapy (n = 507)	270 (53%)	154 (30%)	45 (9%)	8 (2%)	30 (6%)
Hearing care (n = 508)	291 (57%)	140 (28%)	37 (7%)	12 (2%)	28 (6%)

^a“Not sure” responses not included in significance tests.

[†] $p < 0.10$, with Arkansas indicating less comfort with timeliness of referrals. PRIMARY CARE MDS' EXPERIENCE WITH

Table 6**Primary Care Physician Experience with Children with Oral Clefts in Training**

Cleft care experience	Arkansas (n = 139)	Iowa (n = 387)	New York (n = 909)	Total (n = 1435)
Experience during training (n = 1411)				
None *	22 (16%)	107 (28%)	203 (23%)	332 (24%)
Medical school **	56 (41%)	138 (36%)	266 (30%)	460 (33%)
Residency ***	83 (60%)	183 (48%)	528 (59%)	794 (56%)
Don't know/don't remember	19 (14%)	60 (16%)	109 (12%)	188 (13%)
Adequacy of clinical experience ^a (n = 1388) [†]				
About right	36 (26%)	115 (30%)	229 (26%)	380 (27%)
Not enough	88 (63%)	213 (56%)	489 (56%)	790 (57%)
Not sure/don't remember	15 (11%)	50 (13%)	153 (18%)	218 (16%)
Adequacy of didactic experience (n = 1390) ****				
Too much	0 (0%)	0 (0%)	1 (0.1%)	1 (0.1%)
About right	36 (26%)	137 (36%)	231 (26%)	404 (29%)
Not enough	88 (63%)	186 (49%)	456 (52%)	730 (53%)
Not sure/don't remember	15 (11%)	55 (15%)	185 (21%)	255 (18%)

^aNo one reported receiving too much clinical experience.

*
 $p < 0.05$.

**
 $p < 0.01$.

 $p < 0.005$.

 $p < 0.001$.

[†]
 $p < 0.10$.