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Primary Care Physicians' Knowledge of and Confidence in Their Referrals for Special Education Services in 3- to 5-Year-Old Children

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Abstract

Background—Children 3 to 5 years old with developmental delays are eligible for special education services.

Objective—To assess primary care physicians' (PCPs) knowledge, attitudes, and practices regarding their referrals to the special education system on behalf of children 3 to 5 years old.

Design/Methods—Mail survey of 400 office-based general pediatricians and 414 family physicians in Michigan, fielded in fall 2012 and winter 2013, with a response rate of 44%. The 4-page survey included knowledge questions about special education eligibility, PCPs' role in accessing school-based services, and self-confidence in ability to help patients access these services.

Results—PCPs neither fully understood requirements for special education services nor were they very confident in identifying 3- to 5-year-old children eligible for special education services.

Conclusions—PCPs recognize interacting with special education as a relative weakness, and they may be accepting of interventions to improve their knowledge and skills.

Keywords

special education; school

Introduction

Primary care physicians (PCPs) play a central role in identifying children with developmental delays. They see children regularly during the peak ages for detection (1-5 years), and as such, have the opportunity to link the children with suspected developmental delay in their practice with the appropriate available services. Recent initiatives have focused on increasing developmental screening in children younger than 3 years,[1] which has been associated with increased referral to early intervention for these children.[2] However, less attention has been paid to children 3 to 5 years old.

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One of the major service providers for 3- to 5-year old children with developmental delays is the public school system. Federal law, specifically the Individuals with Disabilities Education Act (IDEA), mandates that all children nationwide (aged 3-21 years) are eligible to receive school-based special education services.[3] Eligibility for special education services under IDEA is determined based on a child meeting the criteria for 1 of 14 disability categories. Thirteen categories have disability determined based on evaluation by school personnel; these categories include autism, developmental delay and speech and language impairment among others.[4] One category, "Other Health Impairment," requires a physician diagnosis in addition to the evaluation by school personnel; it includes diagnoses such as attention deficit hyperactivity disorder, diabetes or epilepsy that are interfering with school performance. The Other Health Impairment category accounts for 11% of children 3 to 21 years old receiving special education.[5] Once the disability is determined, an individualized plan of services is established. Both eligibility determination and provision of services occur through the school district in which the child resides. There is no income requirement.

To facilitate referral for special education services for children, PCPs need to understand eligibility requirements, effectively screen for which children are likely to meet eligibility requirements, and know how to refer these children for special education services. There is little information on PCPs' knowledge, attitudes, and practices regarding interacting with the special education system on behalf of 3- to 5-year-old children in the course of the provision of primary care to children. Therefore, the objective of this study was to assess PCPs' knowledge, attitudes, and practices regarding their referrals to the special education system on behalf of children 3 to 5 years old.

Methods

Survey Sample

We conducted a mail survey of office-based primary care providers in Michigan, focusing on knowledge, attitudes, and practices regarding, as well as perceived barriers to accessing school-based services for 3- to 5-year-old children with developmental delay. The study was approved by the Institutional Review Board of the University of Michigan.

A random sample of 400 pediatricians and 414 family physicians practicing in Michigan was obtained from the American Medical Association (AMA) Physician Masterfile through a contracted vendor. The AMA Physician Master file is the most comprehensive physician listing in the United States and includes both AMA members and nonmembers. The sampling frame included all allopathic and osteopathic physicians providing direct, office-based, patient care. Excluded were physicians aged 70 years or older, resident physicians, and physicians practicing at federal medical facilities (e.g., Veterans Affairs, military).

Survey Instrument

The investigators developed and refined survey items that reflected the primary study aims, drawn from clinical experience, brief structured interviews with primary care clinicians, and

federal special education law. The 4-page, 17-question survey included fixed-choice questions regarding (in order presented in survey):

- Availability and quality of physical, occupational, speech therapy, and autism/behavioral therapy services for patients 3-5 years old with developmental delay
- Three clinical vignettes (3-year-old girl with global developmental delay, 4-year-old boy with autism, 4-year-old girl with isolated speech and language delay), asking the respondents to indicate where they would be most likely to refer for ancillary services
- Major influences on their referral patterns
- Requirements for a 3- to 5- year-old child to be eligible for special education services through the public schools
- Number of patients 3 to 5 years old in their patient panel, number in whom they have suspected or diagnosed developmental delay, number of these patients referred for special education services, and those who received services
- Perceived minor and major barriers to their 3- to 5-year-old patients receiving special education services
- How often primary care providers should perform activities for 3- to 5-year-old patients recommended for special education services
- Confidence in their ability to do tasks related to their 3- to 5-year-old patients accessing special education services
- Proportion of pediatric patients covered by Medicaid in their practice

Questions were pilot-tested with a convenience sample of physicians to assess clarity and ease of administration; revisions were made on the basis of their feedback.

Survey Administration

The survey mailings included a personalized cover letter inviting participation and a postage-paid reply envelope. The initial mailing was completed in September 2012. Two subsequent mailings were sent to nonrespondents at a 6-week, and then 4-week interval. After the third mailing, the response rate for pediatricians was 47% and for family physicians was 31%. We wished to increase the response rate; therefore, we performed a preliminary data analysis, and identified the survey items that yielded the key results. The survey instrument was then revised into a 2-page, 8-question survey. This briefer survey was then sent as a fourth mailing to nonrespondents after 2 months. This survey excluded the following items: perceived availability and quality of ancillary services, clinical vignettes, and some perceived barriers.

Data Analyses

We calculated response frequencies for all items. Chisquare analyses were used to assess bivariate associations with physician characteristics from the Masterfile: sex, years in practice (categorized as 10 years, 11-20 years, >20 years), physician type (pediatrician vs

family physician), and physician reported characteristics of their patient population characteristics: number of patients 3 to 5 years old with suspected developmental delay (categorized as ≤ 15 patients vs >15 patients), prior referral rates of children with suspected developmental delay for school-based special education services (all or almost all patients with suspected developmental delay vs fewer), and proportion of pediatric patients covered by Medicaid in their practice ($\leq 25\%$ [low] vs $>25\%$ [high]). P values $<.05$ were considered statistically significant. All analyses were conducted with STATA, version 12.0 (StataCorp LP, College Station, TX).

Results

Of the 814 physicians in the mailing sample, 28 were excluded because the mailing addresses were incorrect. Returned surveys from 344 respondents yielded an overall response rate of 44% (55% among pediatricians, 40% among family physicians). After excluding 89 respondents who do not provide outpatient primary care to 3- to 5-year-old children, our final analytic sample contained 174 pediatricians and 83 family physicians.

Respondent characteristics are presented in Table 1. Consistent with national practice patterns, the family physicians were more likely to be male, and to report seeing fewer children. For both pediatricians and family physicians, nonrespondents were more likely to be male ($P < .05$); there was no difference in their years in practice.

As presented in Table 2, more than three quarters of PCPs correctly identified residence in the school district as special education eligibility requirement, and that there is no income requirement. Pediatricians (79% vs 67%, $P = .04$) were more likely to correctly identify that there is no income requirement. While two thirds of PCPs believed that evaluation by school district personnel was required, they were less clear on whether a physician diagnosis was required.

Table 3 displays PCPs' perceived role in assisting access to school-based special education services for children aged 3 to 5 years. The majority felt their role included explaining the special education process to parents and providing documentation of a specific diagnosis for all patients referred for special education services. PCPs who were more likely to endorse that their role includes explaining the special education process for all patients were those with >15 patients with suspected delay (66% vs 46%, $P = .003$), and pediatricians (61% vs 41%, $P = .004$).

The most commonly endorsed major barriers to the physicians' patients 3 to 5 years old receiving special education services were schools not having enough special education slots or services for all children who qualify, and special education evaluations taking too long (Table 4). Only a minority of physicians identified as barriers children not qualifying and parents thinking that school-based services are of lower quality.

Table 5 presents PCPs' reported self-confidence in tasks related to assisting 3- to 5-year-old children receiving special education. Approximately one third of PCPs feel "very confident" identifying children eligible for special education services, directing families on how to access special education services, and informing parents on their rights related to special

education services. PCPs more likely to report feeling “very confident” in identifying children eligible for special education services were those with >15 patients with suspected developmental delay (53% vs 27%, $P = .001$), those who have previously recommended special education services for all/almost all of their patients (46% vs 31%, $P = .016$), and pediatricians (50% vs 9%, $P = .001$).

Discussion

Primary care physicians endorse that they have a role in facilitating access to school-based special education services for 3- to 5-year-old children, but do not fully understand eligibility requirements for these services, and do not feel confident in their knowledge or skills. Better understanding of the eligibility requirements and greater confidence were associated with PCPs who have had greater prior experience with children with developmental delay and with referring children for school-based special education services, as well as pediatricians.

A key role PCPs play is to explain the special education process to families when referring their patients for school-based special education services. Just more than half of the PCPs surveyed endorsed this as a responsibility for all patients referred. These children younger than 5 years are not yet involved with the public schools, and the families would likely benefit from an explanation of how to access these services. In a prior study of children referred for early intervention, parents who did not follow through with the referral for early intervention services have cited a lack of explanation of what early intervention does or how to obtain services as a reason for their lack of follow up.[6]

Primary care physicians had the most difficulty understanding who has the responsibility for making the diagnosis of a qualifying condition, specifically whether that responsibility falls to them or the school. For 13 of the 14 eligibility categories, the school is responsible for determining the categorization (or diagnosis). However, to meet criteria for the Other Health Impairment category, a physician diagnosis is an additional requirement. As such, the system does not have the same eligibility criteria for each student, and this can cause confusion.

Primary care physicians do not fully understand the special education eligibility requirements, which might partially explain why only approximately half of the PCPs felt it was their role to explain the special education process after referring a patient. Prior studies have also found that pediatricians lack complete understanding of the special education requirements.[7,8] In our study, many PCPs indicated they thought a physician diagnosis was required for children to receive services. While this is true for the children receiving services under the Other Health Impairment category, it is not true for the other categories. There are many 3- to 5-year-old children who would be eligible for special education services under the categorization of developmental delay or autism, or others who would not require a physician diagnosis. Yet, if providing a diagnosis for a child to qualify for an Other Health Impairment category is the way in which PCPs typically interact with the school special education system, they may think this applies to all categories. PCPs who believe their diagnosis is required for special education services, and are less confident in making a

specific diagnosis in a child with developmental delay might be less likely to refer children for services through the school. Increasing PCPs' understanding of the eligibility requirements may lead to more appropriate referrals for services through the special education system. Free text responses at the end of the survey included recurring comments indicating that they wanted to gain a better understanding of the special education process, and suggesting local continuing medical education on this topic.

Primary care physicians are not very confident in their abilities to identify children who might be eligible for special education services (particularly the family physicians). Yet identifying children with developmental delay through developmental surveillance is a core competency for pediatricians and family physicians.[1,9] However, identification of children that might be eligible for services includes a clinical concern about their development, and an understanding of special education eligibility criteria. It is likely that a portion of this lack of confidence stems from their lack of understanding of eligibility criteria.

Primary care physicians' role in education has been described for more than 30 years. The first law ensuring access to special education services in the United States, the Education for All Handicapped Children Act, was passed in 1975. Pediatricians have since been repeatedly identified as responsible for referring children to the schools for special education evaluations, coordinating care, and educating, counseling, and advising families about the special education system.[10-15] Family physicians have been tasked with being familiar with the community school system and child's educational rights. 16 However, our respondents endorsed a less substantial role for the PCP in facilitating access to special education services for 3- to 5-year-old children. Perhaps, as a first step, it would be beneficial to identify a few key roles for PCPs, and ensure they have the ability to carry out these roles.

Interventions targeted at increasing PCPs' understanding of special education eligibility requirements would likely improve PCPs' interactions with the special education system on behalf of 3- to 5-year-old children through both increased ability to correctly identify which children would be eligible for special education services and also increasing confidence. However, there may be local variability in the implementation of federal special education eligibility requirements, and these interventions may need to be targeted to the local community.

Some limitations are noted for this study. The survey was sent to PCPs in Michigan, so may not reflect the attitudes, behaviors, and practices of PCPs nationwide. These results represent self-reported attitudes, behaviors, and practices, and the study was not designed to independently verify the accuracy of self-report. Also, as is inherent with mail surveys, there is the potential for response bias. Though our analyses demonstrated minimal differences in demographic characteristics between respondents and non-respondents, PCPs who do not often see patients with developmental delays may have been less likely to respond. Although we cannot ascertain the magnitude of this bias, the response rate for this study compares favorably with other recent national and statewide surveys of pediatricians and family physicians.[17-20]

In conclusion, these results suggest that PCPs recognize interacting with special education as a relative weakness, and they may be accepting of interventions to improve their knowledge and skills. However, designing interventions will be a challenge because of the significant local variation in implementing federal eligibility requirements.

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Table 1
Characteristics of Respondents and Their Practices

	All Respondents (N = 247); %	Pediatricians (n = 174); %	Family Physicians (n = 83); %	Comparison (χ^2 P Value)
Male sex	36	30	47	.010
Physician years in practice				
10	25	26	22	.423
11-20	33	34	30	
>20	42	40	48	
No. of patients aged 3-5 years with suspected developmental delay seen in past 3 years				
15	62	46	95	<.001
>15	38	54	5	
Proportion of patient with suspected developmental delay they (primary care physicians) have referred for school- based special education services				
All/almost all	57	53	65	.086
Fewer	43	47	35	
Proportion of pediatric patients in practice covered by Medicaid				
Low (< 25%)	59	56	63	.272
High (>25%)	41	44	37	

Table 2
Primary Care Physicians' Knowledge of Special Education Requirements.^a

	Required (%)	Not Required (%)	Unsure (%)
a. Residence in the school district	78	7	15
b. Family income below a certain threshold	4	79	17
c. Evaluation by school personnel	68	14	18
d. Physician diagnosis of a qualifying condition	48	39	13

^a Responses to “Which of the following are required for a 3- to 5-year-old child to be eligible for special education services through the public schools?” (N=247).

Table 3
Primary Care Physicians' Role in Assisting Patients Access Special Education Services.^a

	For All Patients (%)	For Some Patients (%)	In Unusual Cases Only (%)
Explain the special education process to parents	54	33	13
Provide documentation of a specific diagnosis	51	42	7
Complete/sign a referral form for the school district	47	40	13
Contact the school to facilitate the referral	15	44	41
Attend Individualized Education Program (IEP) meeting	3	14	83

^aResponses to "In your opinion, how often should primary care providers perform the following activities for 3- to 5-year-old patients recommended for special education services?" (N=251).

Table 4
Primary Care Physicians' Perceived Barriers.^a

	Major Barrier (%)	Minor Barrier (%)	Not a Barrier (%)
Schools do not have enough special education slots or services for all children who qualify	45	34	21
Special education evaluations take too long	32	40	28
Parents do not follow through on referrals to schools	23	61	16
Children referred to special education do not qualify	17	51	32
Parents think school-based services are of lower quality than private or hospital-based services	17	51	32

^aResponse to "Please rate the following in terms of whether they are barriers to your 3- to 5-year-old patients receiving special education services?" (N=248).

Table 5
Primary Care Physicians' Self-Confidence.^a

	Very Confident (%)	Somewhat Confident (%)	Not Confident (%)
Identify which patients qualify for special education services	37	53	10
Direct families on how to access special education services	30	54	16
Inform parents of their rights related to special education	29	47	24
Convince parents to seek special education services	45	50	5

^a Response to "For your 3- to 5-year-old patients with behavioral/developmental problems, how confident are you in your ability to do the following related to special education services?" (N=255).