Cornerstones

Practice-Based Research Syntheses of Child Find, Referral, Early Identification, and Eligibility Practices and Models

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Physician Referrals of Young Children with Disabilities: Implications for Improving Child Find

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This practice-based research synthesis examined physician referrals to specialist secondary care including early intervention and preschool special education. The synthesis included 29 studies of 6,405 primary care physicians and other medical personnel. The focus of review was the types and patterns of referrals and the feedback desired from specialist secondary care providers. Findings showed that children were referred for secondary care for many different reasons and that primary care physicians desired specific feedback about referred children but that feedback rarely was provided. Implications for improving referrals from primary referral sources are described.

Purpose

The purpose of this practice-based research synthesis is to identify (1) types and patterns of physician referrals of young children with disabilities, developmental delays, and other disability-related conditions for specialty secondary services and (2) the particular kinds of feedback that physicians wanted from the person or practice to whom a referral is made. Findings from a number of studies suggest that physicians making specialty referrals do so for a variety of reasons and that there is an expectation that feedback will be provided both in a form that is desired and in a timely manner (Forrest et al., 2000; Jones & Jordan, 1993).

The synthesis was conducted using a framework that focused on the characteristics of a practice associated with different decisions, outcomes, or expectations (Dunst, Trivette, & Cutspec, 2002). We examined the literature on physician referrals with a focus on who is referred to whom for what reasons and the types of feedback that physicians wanted and in what format they wanted the information. The major aim was to identify and isolate those practices that would most likely result in physician referrals to early intervention and preschool special education and the conditions that would sustain referral patterns. Findings were expected to inform the manner in which primary referral sources were best approached in order to improve child find and be used to develop guidelines for responding to the receipt of referrals and for providing useful and informative feedback.

Background

Promoting physician referrals of young children with identified conditions and developmental delays is one goal of child find (Berman & Melner, 1992; Dunst & Trivette, 2004). Children are generally referred for early childhood intervention or specialist care when the need for behavioral, developmental, or therapeutic services

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is recognized as needed and warranted. The extent to which a referral is likely to be made is dependent in part on a belief that specialist care will benefit a patient (Forrest, Nutting, Starfield, & Von Schrader, 2002; Javalgi, Joseph, Gombeski, & Lester, 1993).

Recent years have seen an increase in the number of articles describing the importance and value of the physician/early intervention interface (e.g., Berman & Melner, 1992; Helm & Shishmanian, 1997; Solomon, 1995). Results from a number of studies indicate that physician satisfaction with referrals is dependent to a large degree on physician/referral care specialist coordination and communication (Forrest et al., 2000; Jones & Jordan, 1993; Parker, Wright, Robertson, & Sengoz, 1996). Information obtained from physicians as part of activities at the Tracking, Referral and Assessment Center for Excellence (TRACE) indicates that many early intervention practitioners and secondary care specialists do not provide feedback about referrals made by the physicians. These same physicians indicated that when no feedback is provided, they typically cease making referrals to these practitioners and secondary care specialists.

Description of the Practice

Referral means the procedures or steps taken by an individual (e.g., physician) or entity (e.g., NICC) on behalf of an infant, a toddler, or a preschooler to obtain the opinion, supports, or services of another individual (e.g., early intervention practitioner) or entity (e.g., early intervention program). The term is used specifically by TRACE to mean the efforts of Part C/Part B(619) program personnel to promote or increase referrals to early intervention or preschool special education by physicians, hospitals, child care personnel, information and referral programs, and other primary referral sources (Berman & Melner, 1992).

A referral involves both the person making a referral and person to whom a referral is made. Persons making a referral do so because they consider a specialty provider a source of advice, assistance, treatment, etc. that will benefit the person being referred. Primary referral sources are especially interested in knowing that a referral was received and processed, and want to be kept informed about the decision and course of action taken by the specialist care provider. Studies that included information about the referral process, the reasons for referrals, or the feedback desired by primary referral services constituted the focus of this research synthesis.

Search Strategy

Search Terms

Identification of relevant studies was done using *referral* as a major subject heading in combination with one of the following keywords: *physician*, pediatri*, paedatri*, neonatol*, perinatol*, family practi*, general practi*, primary care,* and *primary health care*.

Sources

The following databases were searched for relevant studies: Psychological Abstracts online (PsycINFO), Educational Resources Information Center (ERIC) database, MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Health Source: Nursing/Academic Edition, Cochrane databases, OCLC PapersFirst, and World Cat. In addition to these databases, the Referral Study of the American Academy of Pediatrics, Pediatric Research in Office Settings' (PROS) Web site was examined for relevant studies. Hand searches were done of the reference sections of identified studies.

Selection Criteria

Studies were included in the synthesis if persons constituting the focus of referral were children birth-to-17 years of age and the children were referred by a primary care physician to a secondary care provider. This included referrals to other physicians, developmental therapists, or early childhood intervention practitioners. Studies were also included if they described the kinds of feedback physicians wanted from a secondary specialist care provider.

Search Results

Twenty nine (29) studies were located that meet the inclusion criteria. Table 1 includes background information about the study participants, the number of children who were referred, and the age ranges of the children. Twenty two (22) studies investigated pediatrician referrals, 9 studies investigated general practitioner referrals, 7 studies investigated family physician referrals, and the remaining studies investigated the referrals of other kinds of physicians and medical personnel. The 29 studies included 6,405 physicians.

The children for which age ranges were provided were between birth and 17 years of age with most being between birth and 12 years of age. Twelve (12) studies investigated referrals of children birth-to-3 years of age; two studies investigated referrals of children 3-to-5 years of age, and four studies investigated referrals of children birth-to-5 years of age. Studies of infants, toddlers, and preschoolers represented about two thirds (62%) of all studies included in the synthesis.

Synthesis Findings

Table 2 shows the reasons for referrals, the type of specialists to whom referrals were made, and the kinds of feedback expected or requested by the referring physi-

cians. The reasons for referrals were described in 79% of the studies, the type of specialist to whom referrals were made was included in 93% of the studies, and 45% of the studies included information about feedback that was desired or requested.

Reasons for Referrals

There were 87 different child conditions that triggered referrals. Table 3 shows the conditions organized into 2 main categories and 10 subcategories. The behavioral and developmental concerns included conditions that would typically make a child eligible for early intervention or preschool special education (e.g., Down syndrome, sensory impairments). The medical and health concerns included conditions that are not generally associated with developmental delays or disabilities even without medical treatment (e.g., dermatitis, skin lesions) and conditions that have a high probability of behavioral or developmental difficulties if not treated medically (e.g., seizures, otitis media). Almost two thirds of the reasons for referrals were behavioral- or developmental-related conditions and about one third of the referrals were for medical and health conditions.

The behavioral and developmental conditions of referred children included, but were not limited to, speech and language disorders or delays (5%); global (5%), mild (4%), and severe developmental delays (3%); behavioral problems (4%); and motor delays and disorders (3%). The medical conditions of referred children included, but were not limited to, diabetes (4%), asthma (4%), and congenital heart disease (3%).

Secondary Referral Specialists

Referrals were made to 53 different kinds of practitioners and programs or organizations. The types of specialists to whom referrals were made were one of three kinds of professionals: physicians and other medical specialists (54%), developmental and behavioral specialists (29%), and therapists (14%). Three (3) percent of the children were referred to other professionals.

The physicians and other medical specialists included pediatric sub-specialists (9%), orthopedic surgeons (5%), otolaryngologists (4%), dermatologists (4%), and neurologists (4%). The developmental and behavioral specialists included psychologists (9%), early childhood intervention practitioners (6%), and educators (3%). The therapists included speech and language pathologists (5%), physical therapists (4%), audiologists (3%), and occupational therapists (2%).

Patterns of Referrals

Patterns of referrals were determined by examining the relationship between reasons for referral and secondary referral specialists (behavioral/developmental, medical, therapist). Table 4 shows the percent of children referred to the different secondary specialists. Results showed, as would be expected, that a child's presenting condition was associated with the type of specialist to whom the children were referred, $\chi^2 = 144.20$, df = 16, $p < .0001$.

Results showed that children with certain presenting conditions were more likely to be referred to certain types of specialist secondary care providers or programs. Children with major medical conditions were more likely to be referred to medical specialists. Children at risk for poor outcomes (for environmental or biological reasons), children with social-emotional or behavioral problems, and children with developmental delays were more likely to be referred to behavioral or developmental specialists. Children with speech and language delays or disorders were more likely to be referred to therapists. These findings were not unexpected and reflect the fact that physicians use a child's presenting condition as the basis of making decisions regarding where and to whom a referral is made and considered most appropriate.

Feedback

There were 68 different instances of feedback that was desired or requested by the referring physicians. The types of feedback were organized into five categories and included: eligibility determination, evaluation results, intervention, progress reports, and physician involvement. The percent of types of feedback in each category was 15% for eligibility determination, 26% for evaluation results, 20% for intervention, 24% for progress reports, and 15% for physician involvement.

Eligibility determination included acknowledging the receipt of a referral, status of scheduling an evaluation, and an indication that the child was or was not eligible for services or program enrollment. Evaluation results included assessment results and findings, assessment reports, and diagnostic results. Intervention included information about available services, treatment options, and IFSP/IEP plans. Progress reports included information on child progress, feedback on type and frequency of service provision, and changes in service provision. Physician involvements include coordination of child services, joint follow-up communication, and face-to-face visits by the practitioners in the physicians' offices.

Information available in the research reports was examined to determine the extent to which desired feedback was provided to the referring physicians. There was a very large difference between wanting to receive feedback and actually being provided information. Only 12% of referrals that included requests for feedback actually occurred. These findings are very similar to those reported by HaileMariam et al. (2002) who found dis-

crepancies between preferred physician feedback and frequency and type of feedback received.

Conclusion

Findings from this practice-based research synthesis indicate that primary care physicians make referrals for a broad range of child medical, behavioral, and developmental conditions, and that those referrals are made to a host of specialists. Findings also show that primary care physicians expect different kinds of feedback but often are not informed about the children being referred.

The reasons physicians make or do not make referrals to secondary referral specialist care is complex and is often difficult to easily change (Faulkner et al., 2003; Grimshaw et al., 2005). Findings from a study conducted by TRACE indicate that children who are clearly eligible for early intervention are not referred for these services when a child's presenting medical condition took precedence in terms of the focus of treatment (Trivette & Dunst, 2006a). The patterns of referrals found in this synthesis indicate that there is a clearly discernable relationship between a child's presenting condition and type of referral. Knowledge of these kinds of patterns of referrals can be especially informative in terms of targeting child find activities (Blancquaert, Zvagulis, Gray-Donald, & Pless, 1992; Forrest, Majeed, Weiner, Carroll, & Bindman, 2003; Rushton, Bruckman, & Kelleher, 2002).

Studies by HaileMariam et al. (2002) and Jones and Jordan (1993) indicate that referring physicians desire many different kinds of feedback from secondary care specialists, but that they often do not receive feedback or the feedback is in a form that is deemed not helpful. Results from this synthesis essentially are the same. Inasmuch as satisfaction with referrals is an important factor associated with referral rates, providing the right kind of feedback is highly indicated (Forrest, Glade, Baker et al., 1999; Parker et al., 1996; Rothschild, 2002).

Implications for Practice

Results from this research synthesis were used, in part, to develop a feedback section of a universal referral form for use by primary referral sources (Trivette & Dunst, 2006b). The feedback section provides a primary referral source the opportunity to indicate the type(s) of feedback or information desired from an early intervention or preschool special education program in response to a referral. The particular feedback items included on the referral form are the ones identified in this practice-based research synthesis as the type of information most desired by physicians. A version of the referral form is included as part of an American Academy of Pediatrics (in press) policy statement on early intervention.

The results from the syntheses are also being used to develop a child find practice guide that early intervention and preschool special education practitioners can use to provide timely feedback in a form most desired by physicians and other primary referral sources (Dunst, in preparation). The practice guide includes a checklist and an example of a feedback form that can be used to acknowledge referrals and provide feedback as services are provided. The checklist, for example, includes items to determine whether a reply is made to a referral source, whether the status of eligibility determination is communicated to the primary referral source, and whether feedback is routinely provided on the provision and monitoring of child service provision and progress.

A nontechnical summary of this practice-based research synthesis is available for practitioners and parents (*Endpoints*, Volume 2, Number 1) that includes a description of the key characteristics of referral patterns and desired feedback. The *Endpoints* summarizes the major findings in this paper and includes information for improving child find and increasing and maintaining referrals from primary referral sources. The content should prove informative in terms of those child find and referral practices that should improve early childhood intervention/primary referral source communication.

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Table 1
Number and Age Range of Children Referred by the Study Participants

Study	Participants		Referred Children	
	Physicians	Number	Number Referred (actual or hypothetical)	Age Group (years)
Adams (1982)	Pediatricians, general practitioners	90	270	Newborn
American Academy of Pediatrics (2002)	Pediatricians	649	Not reported	0–3
Blancquaert et al. (1992)	Pediatricians, general practitioners	754	Not reported	< 16
Buck et al. (2001)	Pediatricians, family physicians	640	Not reported	Not reported
Chithiramohan et al. (1993)	General practitioners	130	Not reported	Not reported
Christie & Evesham (1998) (Sample 1)	General practitioners, health visitors	Not reported	1460	< 5
Christie & Evesham (1998) (Sample 2)	General practitioners, health visitors	Not reported	896	5–16
Epps & Kroeker (1995)	Family physicians	59	4	1–3
Esposito (1978)	Pediatricians, pediatric neurologists	28	Not reported	< 1
Forrest et al. (2003) (Sample 1)	Managed health care with primary care physicians as gatekeeper, HMOs, point-of-service plans	Not reported	27,877	0–17
Forrest et al. (2003) (Sample 2)	General practitioners	Not reported	19,254	0–17
Forrest et al. (2000)	Pediatricians	122	963	< 1– ≥ 11
Forrest, Glade, Baker, et al. (1999)	Pediatricians	142	1854	< 1–11+
Forrest, Glade, Starfield, et al. (1999)	Pediatricians	142	779	0–11+
Glade et al. (2002) (Sample 1)	Pediatricians	142	506	0–17
Glade et al. (2002) (Sample 2)	Pediatricians	142	1310	0–17
Goodman & Cecil (1987)	Pediatricians	259	12	1–4
HaileMariam et al. (2002)	Pediatricians	332	Not reported	5–12
Helm & Shishmanian (1997)	Pediatricians	132	Not reported	0–3
Hess et al. (1997)	Pediatricians, general practitioners	42	Not reported	0–3
Humera (1994)	Pediatricians, family physicians	38	14	0–3
Jones & Jordan (1993)	Pediatricians, general practitioners	60	Not reported	Not reported
Lees et al. (2000) (Sample 1)	General practitioners	114	0	3–5
Lees et al. (2000) (Sample 2)	Health visitors	49	6	3–5
Majnemer et al. (2002)	Physicians, other health professionals, school, parents	Not reported	129	< 5
Rothschild (2002)	Pediatricians	11	Not reported	0–3
Rushton et al. (2002)	Pediatricians, family physicians	385	650	4–15
Scott et al. (1993)	Pediatricians, specialty pediatricians	342	Not reported	0–3
Shevell et al. (2001)	Pediatricians, general practitioners, specialty physicians, allied self	79	224	< 5
Shonkoff et al. (1979)	Pediatricians	97	Not reported	0–5
Sices et al. (2004)	Pediatricians, family physicians	540	4	1–3
Singh & Winton (1984) (Sample 1)	Family physicians	400	Not reported	Not reported
Singh & Winton (1984) (Sample 2)	Family physicians	304	Not reported	Not reported
Teplin & Esolar (2000)	Pediatricians, family physicians, pediatric or family nurse practitioners and sub-specialists	607	Not reported	0–3

Table 2
Reasons for Referrals, Referral Specialists, and Types of Requested Feedback

Study	Reason for Referral	Type of Specialist Patient Was Referred To	Requested Feedback
Adams (1982)	Developmental delay, identified condition	Developmental, medical	Not reported
American Academy of Pediatrics (2002)	Developmental delay, speech/language, sensory, motor, at risk, social/emotional	Developmental, medical	Assessment results, treatment, progress report, eligibility, referral contact made, referral source
Blancquaert et al. (1992)	Health	Medical	Referring physician involvement
Buck et al. (2001)	Not reported	Developmental	Progress report
Chithiramohan et al. (1993)	Health, motor, at risk, social/emotional	Developmental, medical	Not reported
Christie & Evesham (1998)	Speech/language	Therapy	Not reported
Epps & Kroeker (1995)	Developmental delay	Developmental, medical, therapy	Not reported
Esposito (1978)	Sensory, motor, identified condition	Developmental	Not reported
Forrest et al. (2003)	Sensory, health, motor, social/emotional, identified condition	Medical	Timely response
Forrest et al. (2000)	Not reported	Medical	Progress report, referral contact made
Forrest, Glade, Baker, et al. (1999)	Developmental delay, speech/language, sensory, motor, at risk, social/emotional identified condition	Developmental, medical, therapy	Treatment, referring physician involvement
Forrest, Glade, Starfield, et al. (1999)	Heath, social/emotional	Not reported	Treatment
Glade et al. (2002)	Not reported	Medical	Progress report, referral contact made
Goodman & Cecil (1987)	Developmental delay	Not reported	Not reported
HaileMariam et al. (2002)	Identified condition	Medical	Assessment results, progress report, eligibility
Helm & Shishmanian (1997)	Not reported	Developmental	Available services
Hess et al. (1997)	Speech/language	Developmental, medical, therapy	Referral contact made
Humera (1994)	Not reported	Developmental	Not reported
Jones & Jordan (1993)	Not reported	Developmental	Assessment results, treatment, progress report, referral contact made
Lees et al. (2000)	Speech/language	Therapy	Not reported
Majnemer et al. (2002)	Developmental delay, speech/language, motor, identified condition	Therapy	Not reported
Rothchild (2002)	Developmental delay	Developmental, therapy	Not reported
Rushton et al. (2002)	Developmental delay, health, at risk, social/emotional, identified condition	Developmental, medical	Not reported
Scott et al. (1993)	Sensory, health, at risk, identified condition	Developmental	Not reported
Shevell et al. (2001)	Developmental delay, speech/language, motor, identified condition	Developmental, medical	Not reported
Shonkoff et al. (1979)	Developmental delay, speech/language, sensory, motor, social/emotional, identified condition	Developmental, medical, therapy	Not reported
Sices et al. (2004)	Speech/language, motor, social/emotional	Developmental, medical, therapy	Not reported
Singh & Winton (1984)	Developmental delay	Developmental, medical, therapy	Not reported
Teplin & Escolar (2000)	Developmental delay, motor, at risk, social/emotional	Developmental, medical, therapy	Progress report, referral physician involvement, available services

Table 3
Reasons for Referrals to Secondary Referral Specialists

Categories/Subcategories	
Behavioral and Developmental Concerns	
Developmental delay	21
Social/emotional problems	11
Speech/language delays	9
Identified conditions	7
Motor delays	6
Sensory impairments	4
At risk (environmental or biological)	3
Other	1
Medical and Health Concerns	
Medical condition not associated with developmental delay	30
Medical conditions associated with developmental delay	8

Table 4
Patterns of Referrals to Secondary Referral Specialists

	Secondary Referral Specialist (%)		
Reasons for Referral	Behavioral/Developmental	Medical	Therapist
Medical condition associated with developmental delay	14	79	7
Medical condition not associated with developmental delay	9	88	3
At risk	78	22	0
Developmental delay	50	27	23
Motor delay	32	42	26
Speech/language delay	21	24	55
Sensory impairment	22	56	22
Social/emotional	67	30	3
Identified condition	19	62	19