Between Research and Practice:
Provider Perspectives on Early Intervention

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Practitioners' personal perspectives may serve as a lens through which they reject practices that do not match their beliefs or filter the ways in which new practices are interpreted and implemented. The perspectives of 241 multiple-discipline early intervention practitioners were elicited by asking them to describe "three wishes" they would make to change early intervention so that children and families received quality services. Their statements were transcribed and categorized into six major themes: (a) work environment, (b) services, (c) teaming, (d) training, (e) center-based service models, and (f) parent participation. With few exceptions, practitioner perspectives conflicted with accepted early intervention best practices such as family-centered intervention or provision of services in natural environments.

During the past decade, significant amounts of federal, state, and local resources have been directed toward activities designed to promote the use of best practices by early intervention practitioners. Best practices are generally defined as those that have been recommended by respected professionals as well as those for which there is some level of empirical evidence regarding the effectiveness of the practice (e.g., Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). In early intervention, this evidence base ranges from clinical reports to randomized trials, includes both qualitative and quantitative studies, and relates to early intervention as a field or to the practice of individual disciplines such as special instruction or therapies with infants and toddlers and their families. "Evidence-based" practice is advocated across a number of fields and disciplines, including medicine, nursing and health professions, physical and occupational therapies, and speech–language pathology (Bennett & Bennett, 2000; Bury & Mead, 1999; Moyer & Elliot, 2001). In early intervention, "evidence-based" practice is more frequently labeled as "recommended practice" because there is not necessarily an extensive or empirically derived database supporting practices recommended by the field (Sandall, McLean, & Smith, 2000).

The increasing emphasis on implementation of best practices has been accompanied by a growing awareness of both the gaps between research and practice and the ineffectiveness of typically used strategies for translating research results into daily practice (Fey & Johnson, 1998). Several barriers to effectively translating research into practice have been associated with different groups, including practitioners/clinicians, researchers, and policymakers (Sackett et al., 2000). Lack of time for team development, limited access to the literature, limited opportunities for training, and personal beliefs have been identified as barriers associated with practitioner implementation, as have attitudes such as reluctance to monitor the outcomes of interventions or to change practices.

Training practitioners in empirically based theories has frequently been the strategy of choice for linking research to practice (e.g., Winton, McCollum, & Catlett, 1997). Underlying the use of training as a means of bridging the research-to-practice gap is an assumption that practitioners will use best practices once they have been given the knowledge and skills to do so. However, R. A. McWilliam (1999) has suggested that early intervention practitioners are more likely to adopt those practices that support their values and reject those that are incompatible, regardless of whether or not practices are "best" or recommended by a field. Other researchers have noted that the ways in which practices are implemented are often mediated by the values and beliefs held by the prac-

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titioners (Stoneman, 1993). For example, the values and beliefs that practitioners hold about natural environments are not necessarily those that support the recommended practice (Shelden & Rush, 2001).

Practitioners may report their values as compatible with a recommended practice, even when their actions do not reflect implementation of the practice (Leiber et al., 1998). Researchers have reported that practitioners accept both the philosophy and principles of family-centered care, but this acceptance is not necessarily reflected in their interactions with families and children (Bruder, 2000; O'Neil & Palisano, 2000). Thorpe and Sanchez (1999) discussed the potentially negative effect of a lack of correspondence among practitioners' personal values and beliefs, information they are learning about new practices, and the ways in which these practitioners interact with families and children. These authors suggested that practitioners are likely to reject experiences that are incompatible with their beliefs unless their training experiences provide them with ways of resolving discontinuity between their beliefs and what they are learning.

Ongoing professional development activities may lead to eventual implementation of best practices when training activities are designed to address practitioner-held values and beliefs. However, few training activities are sufficiently designed to allow practitioners to explore the impact of their own values and beliefs on their day-to-day practices (Campbell, Milbourne, & Silverman, 2001; Wolfe & Snyder, 1997). Individuals with responsibility for preservice or inservice training are frequently unaware of their trainees' values and beliefs. The few recent studies that have addressed perspectives of practicing early intervention professionals have done so within a defined context of a specific practice such as family-centered care or natural environments. In order to gain some understanding of the perspectives of those multidisciplinary professionals who regularly interact with families and their infants and toddlers, we surveyed multidisciplinary professionals who were working in early intervention in a large city. Our goal was to identify predominant themes that reflected their views about how they would change or make the early intervention system of high quality.

Method

Participants

A total of 270 service coordinators and multiple-discipline service providers who were employed to provide early intervention services in a large urban city were asked to complete a written survey following their participation in a required professional development activity. Participants provided basic demographic information prior to beginning the training activity. A total of 241 service coordinators, special instructors, occupational and physical therapists, speech–language pathologists, family support coordinators, and members of other disciplines (e.g., psychologists, social workers, nurses) completed the survey. With the exception of the eight family support coordinators and the eight individuals classified as "other," these respondents were responsible for providing services for assigned families and children through staff or contractual arrangements with 27 provider agencies that make up the city's early intervention system. The family support coordinators were parents of children with disabilities who were employed through the service coordination agency to provide support services for any family in a specific geographical area. All participants worked within the early intervention system of a large northeastern city that provides services to almost 2,000 infants and toddlers per month and serves approximately 4,000 children and families annually. Almost 50% of the infants and toddlers who receive services are members of racial minority groups, primarily African American, with a smaller number of children from Hispanic, Chinese, Korean, and Southeast Asian groups. Although we did not ask participants to identify their ethnic heritage, we determined that a majority of the service providers are Caucasian, with a small number being of African American, Hispanic, or Asian backgrounds.

Table 1 provides information about the respondents by professional discipline group. Not all respondents provided all information. The average respondent was 38.51 years old (range = 22–73 years; $SD = 10.59$). Most of the group ($n = 218$; 90.5%) were women. Five persons (2.1%) reporting degrees had completed doctoral degrees, 98 (41.2%) had received master's degrees, and 113 (47.5%) had bachelor's degrees. The remaining 22 (9.3%) had completed high school or received associate degrees. The average number of years of experience in early intervention was 6.86 years (range = .1–31; $SD = 6.81$). Approximately half of the group ($n = 114$) had worked less than 5 years, and 61 (26.64%) had 10 or more years of experience. A total of 196 (81.3%) of the respondents reported at least one child/family on their current caseloads; 36 respondents did not report an active caseload. This group included individuals who provided intake services only, family support coordinators who worked with families but were not assigned individual caseloads, and independent contractors who did not have currently assigned children/families. The average caseload size for the 196 respondents was 19.31 (range = 1–60; $SD = 12.41$). A majority of the respondents ($n = 157$, 79.29%) had caseload sizes of less than 30. The average caseload size of the 39 respondents with caseloads above 30 was 38.64 (range = 31–60; $SD = 4.70$).

Procedures

All respondents were required to participate in a specially designed team project in order to fulfill professional development requirements established by the city's Part C

TABLE 1. Characteristics of Respondents

Characteristic	Discipline							
	Special instruction	Service coordination	SLP	OT	PT	Other disciplines	Family support	Other (not service providers)
Number	63	71	41	40	29	11	8	8
Gender								
Female	60 (95.2)	33 (80.5)	40 (97.6)	37 (92.5)	26 (89.7)	9 (81.8)	8(100)	5 (62.5)
Age								
< 25	4 (7.8)	3 (11.54)	0	7 (20.59)	3 (11.1)	0	1 (25.0)	0
26–34	17 (33.33)	8 (30.77)	11 (30.56)	13 (38.24)	11 (40.74)	3 (33.33)	0	1 (16.67)
35–44	16 (31.37)	12 (46.15)	7 (19.44)	8 (23.53)	9 (33.33)	0	0	4 (66.66)
> 45	14 (27.45)	3 (11.54)	18 (50.0)	6 (17.64)	4 (14.82)	6 (66.67)	4 (75.0)	1 (16.67)
Education								
H. S.	12 (19.4)	0	0	0	0	1 (9.1)	6 (75.0)	3 (42.9)
Associate								
Bachelor's	32 (51.6)	27 (65.9)	7 (17.1)	27 (69.2)	12 (41.4)	4 (36.4)	0	4 (57.1)
Master's	18 (29.0)	13 (31.7)	33 (80.5)	12 (30.8)	16 (55.2)	4 (36.4)	2 (25.0)	0
Doctoral	0	1 (2.4)	1 (2.4)	0	1 (3.4)	2 (18.1)	0	0
Experience								
< 5 years	29 (47.5)	20 (51.4)	18 (48.6)	24 (63.3)	16 (55.2)	4 (40.0)	3 (37.5)	2 (28.5)
5–10 years	7 (11.5)	16 (41.0)	10 (27.0)	6 (15.7)	6 (20.7)	4 (40.0)	0	3 (43.3)
> 10 years	25 (41.0)	3 (7.6)	9 (24.4)	8 (21.0)	7 (24.1)	2 (20.0)	5 (62.5)	2 (28.5)
Caseload number								
< 25	41 (85.4)	5 (13.88)	33 (86.6)	28 (77.8)	20 (76.9)	7 (77.78)	no caseload	no caseload
26–35	6 (12.5)	7 (19.45)	4 (10.6)	7 (19.4)	5 (19.3)	1 (11.11)		
36–39	0	10 (27.78)	1 (2.6)	0	1 (3.8)	0		
> 40	1 (2.1)	14 (38.89)	0	1 (2.8)	0	1 (11.11)		

Note. Numbers in parentheses are standard deviations. Complete information in each category was not provided by all respondents. Many respondents elected not to provide their ages. SLP = speech–language pathologist; OT = occupational therapist; PT = physical therapist.

early intervention program. This training activity was carried out by creating 35 interagency, interdisciplinary project teams, each of which completed a project that focused on one aspect of early intervention (e.g., Individualized Family Service Plan [IFSP] meeting, initial evaluation, intervention session). Each team was assigned a team leader who was employed as a supervisor within one of the early intervention provider agencies. A technical advisor who was employed by the institution responsible for the city's training system was also assigned to each team. The team leader and technical advisor facilitated the team project activities.

As part of the agenda for the final project team meeting, technical advisors provided team members with a survey that was completed during time provided at the meeting. The survey consisted of nine questions, of which eight required open-ended responses. Six of the open-ended questions related directly to the participants' perceptions of changes they had made in their actions with families and children as a result of participating in the team projects. The remaining two open-ended questions were designed to elicit perspectives about the role of families in early intervention and about early intervention practices. This question about early intervention practices asked providers about ways in which they would make the early intervention system different: "Your fairy godmother has granted you three wishes and you can choose three ways in which you would change or make the early intervention system of high quality. What three wishes do you want granted?" The question was framed in this manner in order to encourage responses that might not be viewed as "possible" or "realistic" within their current perceptions of early intervention.

Analysis

We began the data analysis and reduction process by formulating a broad-based research question: "What are early intervention service providers' perspectives about ways in which they would change or make the early intervention system of high quality?" We then used an interactive process of data reduction, data display, and conclusions to analyze the data (Huberman & Miles, 1994). In order to reduce and display the data, each respondent's verbatim responses were entered into a spreadsheet, using three variables to capture all responses for the "three wishes" question. The three separate lists were combined into one list of responses. This yielded a total of 618 response statements that were used in the data analysis process and 105 instances where no answer had been provided.

The statement lists were reviewed for content by two reviewers who were knowledgeable about early intervention but who had not been involved in the implementation of the team training projects. Each reviewer separately conducted a thematic analysis by reading through all of the responses and identifying initial themes by grouping similar responses together (Miles & Huberman, 1994). This grouping process allowed initial themes to emerge from the data. The two reviewers then met together and discussed the initial themes each had identified. This process resulted in a list of agreed-upon themes, such as "related to families" or "use of cell phones," each of which described at least 10 responses from the total list. An "other" category was used for responses that seemed unique, did not seem to relate to the question, were written in ways such that the meaning could not be determined, or did not fit into any of the generally identified categories. A category of "no answer" was also used to track the number of respondents who did not respond to the question or did not list three responses.

Eleven initial themes (plus categories for "no answer" and "other") were assigned numerical codes. Each reviewer separately coded the responses. The reviewers met a second time to review the statements and their assigned codes in order to (a) discuss and resolve differences in rating codes assigned to particular items, (b) review categories to determine if additional themes should be created to allow for clearer representation of items, and (c) review items assigned to the "other" category to identify any additional themes to represent these items. This process yielded 5 additional themes and a total of 16 themes that accounted for a majority of the statements about changes in early intervention practices. These themes are listed in the sidebar. New codes were assigned for each of the 16 themes, and one reviewer assigned the new codes to the total list of response statements. To determine rater reliability, the theme coding categories were verbally reviewed with a third rater, who then independently coded each of the 618 statements. Reliability was calculated by dividing the total number of agreements by the total number of agreements plus disagreements for each of the response lists, with a resultant quotient of .889.

Following identification of the themes that emerged from respondent statements, the data were summarized quantitatively by discipline, years of experience, and caseload size. These descriptive summaries were graphed to create visual representations of the percentage of responses made by each of the subcategory groups in order to explore similarities and differences in patterns of responses.

Results

The 618 statements describing "three wishes for changing early intervention" were provided by 231 of the 241 (95.85%) service providers who completed the survey; 215 (89.21%) respondents provided two statements, and 172 (71.39%) respondents wrote three statements. In a

Theme Categories

What are early intervention service provider perspectives on changes in early intervention?

- Formal parent training through attending classes
- Parent participation with the child and provider during home visit sessions
- Parent availability for and involvement in services
- Less paperwork
- Cell phones and use of computers
- More money
- Caseload size
- Return to traditional center-based models
- Agency-based model (e.g., all services are provided through one agency)
- More early intervention services
- Speech therapy services
- Increased opportunities for team communication
- Reduction in the number of mandatory training requirements
- Different types of training opportunities
- "Seamless" system of services for birth through preschool-age children
- Service coordination

further grouping, 14 of the identified themes were organized under six broad theme categories. This process grouped related themes together without eliminating the individual themes. Most of the statements included in the "other" category were too general to code into a category (see examples in the Appendix) and were eliminated from further analysis. Fewer than 10 statements remained in the initially formed categories of "seamless" system and service coordination, so these categories were not included in descriptive analyses that were performed using the six broad theme areas. The Appendix includes representative examples of statements regarding each of the themes and lists examples of statements representing the "other" category.

Six Broad Theme Groups

The "wish" statements reflected six theme groups that represented early intervention service providers' perspectives about change in early intervention practices. The six groups were improvements in personal employment, increased provision of services, teaming, training, family participation, and service model. Almost 20% of the total number of response statements reflected the theme of *improvements in personal employment*. Statements identified a desire for increased compensation, either directly through increased salaries and wages or indirectly through payment for travel time, meetings, or missed appointments. Respondent statements also related to reductions in paperwork, provision of cell phones and laptop computers to enhance communication abilities, and reductions in caseload size. *Increased provision of services* emerged as a second theme. Almost 15% of the total number of response statements reflected a theme of more services for children (e.g., "more speech now," "feeding therapy"), increased frequency or duration of services (e.g., "2 times per week sessions for 1.5 hours each"), or increases in the number of providers serving particular groups (e.g., "more qualified early intervention providers to serve various ethnic groups"). *Teaming,* almost 15% of the total number of response statements, emerged as a third theme. Statements ranged from very concrete (e.g., "have teams meet") to more abstract ("create infrastructure to support team building and consultation"), but all reflected a desire to have established communication among the professionals in the various disciplines who were working with a child and family.

A fourth theme related to *training*. This theme covered 10% of the total response statements. Respondents expressed statements about the amount of training required by the city's Part C early intervention system and about the content and format of training. About one third of the statements in this theme related to the amount of training, and for the most part, these statements reflected a desire for training to be either eliminated or reduced. However, two thirds of the statements reflected perspectives about the type, format, and content of training for service providers. Statements supported training that was offered through small-group, team-based formats as well as training requirements in particular content areas such as behavior issues, multiple disabilities, and children with special health-care needs. About 7% of the statements defined a fifth broad theme of *family participation*. Included within this category were themes about opportunities for parent education and training, ways in which parents could or should participate during home visits made by professionals, and the extent to which parents did or did not participate in the provision of early intervention services. A majority of statements in these categories identified actions that parents could take: "get training on child development," "attend mandatory training once a year," "want and participate in service," increase "participation during home visit," or "follow through more." Other statements focused on agencies' being able to "terminate services when parents are unresponsive" or focused specifically on fam-

ilies such as those who "repeatedly no show for scheduled visits." The final theme, *service model,* included 7% of the statements and reflected a desire to return to previously used models, particularly center-based service provision. Some of these statements targeted specific disability groups (e.g., "center-based services for a child who is deaf or hard of hearing"), age groups (e.g., "center-based services for 2-year-olds"), or family circumstances (e.g., "center-based services for working mothers"). Other statements in this category did not address center-based services but expressed a preference for previously used administrative structures where a child and family received all early intervention services through the same provider agency (e.g., "one agency for all services for a child").

Statements Made by Discipline Groups

We were interested in exploring the extent to which particular theme statements were associated with discipline groups. The 241 respondents represented eight different groups. Six groups provided services for children and families, and one group, family support coordinators, provided supports for families. The eighth group, labeled "other," consisted of eight individuals who provided specific system functions requiring interactions with families and children, such as intake, but did not provide ongoing services. The "other" group was eliminated from the comparison of statements made by each discipline group. The percentage and ranking of response statements in each theme area for each discipline group are listed in Table 2. As can be seen, there were differences in two theme areas between the percentage of statements made by therapists (i.e., occupational therapists, physical therapists, and speech–language pathologists) and members of other discipline groups. Only 5% of the statements made by the three therapy groups related to increasing services (i.e., more services), while the percentage of other discipline groups approached or exceeded 10%. Family support coordinator statements about increasing services constituted 35% of all statements in this group. The percentages of statements about teaming made by the therapist groups were higher than those of other groups. The highest percentage of statements made by all discipline groups, with the exception of the family support coordinators, related to the theme of personal employment. The smallest percentage of statements made by all discipline groups, with the exception of occupational therapists, related to the theme of family participation. None of the statements made by either the family support coordinators or individuals grouped as "other" were about family participation. For the group as a whole, the personal employment area was the highest ranked, and this area ranked first for all disciplines except speech–language pathologists, occupational therapists, and family support coordinators. The rankings for the occupational therapy group showed the greatest difference from the group rankings.

Respondents' Statements Grouped by Years of Experience

We also compared the percentage of statements made in each of the six theme areas by the years of experience of respondents in order to examine similarities and differences in response patterns. The percentage and ranking of statements made for the six theme areas for each of three experience groups are listed in Table 3. Approximately an equal percentage of statements about personal employment were made by all experience groups. For both the service model and provision themes, the percentage of statements made by each group increased by years of experience. The percentage of statements made under the theme of teaming decreased by years of experience, with the largest percentage of statements recorded by individuals with fewer than 5 years of experience. With respect to theme area rankings, the statements of practitioners with 5 to 10 years of experience were identical to the group rankings, while the rankings of practitioners with fewer than 5 years deviated the greatest from the group rankings.

Respondents' Statements Grouped by Caseload Size

A majority of the 196 respondents who reported caseload sizes of at least one child and family had caseloads of less than 30 children and families. Table 4 lists the percentages of statements and their rank orders in each of the six theme categories when grouped by caseload size categories. The percentages of statements included in each category were relatively consistent for the service provision theme. Respondents with caseload sizes of between 26 and 35 and more than 40 had the highest percentages of statements made about personal employment. Statements about teaming increased with increased caseload, and those about training decreased with increased caseload. Statements about family participation were varied. Respondents with caseloads of between 36 and 39 had the highest percentage of statements made about family participation. The rankings for statements of practitioners with caseload sizes of less than 25 children/families differed the greatest from the rankings of the entire group.

Discussion

The perspectives provided by practitioners resulted in six categories of areas in which they would like to see change: improve work environments, provide more services, increase opportunities for teaming, change training

TABLE 2. Categorical Percentages and Rank Order by Early Intervention Discipline

Category		Discipline											
		Special instructor[a]		Service coordinator[b]		SLP[c]		OT[d]		PT[e]		Family support[f]		Other discipline[g]	
		Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Personal employment	1	1 (0)	14.3	1 (0)	24.5	2 (1)	22.2	2 (1)	17.5	1 (0)	22.8	4 (3)	5.0	1 (0)	38.7
Teaming	2	4 (2)	10.7	3 (1)	13.2	1 (1)	22.8	1 (1)	18.4	2 (0)	22.8	2 (0)	5.0	4 (2)	0.0
Service provision	3	2 (1)	14.3	2 (1)	17.9	5 (2)	5.1	6 (3)	5.8	4 (1)	5.1	1 (2)	35.0	3 (0)	9.7
Training	4	3 (1)	12.5	6 (2)	2.8	3 (1)	11.4	3 (1)	8.7	3 (1)	11.4	3 (1)	5.0	2 (2)	12.9
Service model	5	6 (1)	8.3	5 (0)	4.7	4 (1)	6.3	4 (1)	7.8	6 (1)	6.3	5 (0)	5.0	5 (0)	3.2
Family participation	6	5 (1)	7.7	4 (2)	6.6	6 (0)	5.1	5 (1)	10.7	5 (1)	5.1	6 (0)	0.0	6 (0)	0.0

Note. *N* = the total number of responses in all categories made by respondents in each discipline. Percentages are calculated by dividing the total number of responses in a category by the total number of responses made by individuals within each discipline group. SLP = speech–language pathologist; OT = occupational therapist; PT = physical therapist.
[a]*n* = 168. [b]*n* = 106. [c]*n* = 94. [d]*n* = 103. [e]*n* = 79. [f]*n* = 20. [g]*n* = 31.

opportunities, return to center-based services, and increase parent participation in services. To a large extent, many of the desired changes, particularly those related to families and to service models, are incompatible with best practices in early intervention. Nonetheless, these perspectives represent beliefs held by day-to-day service providers and need to be addressed if the promise of the Part C early intervention program is to be realized fully for families and their children. It is important to understand that this study elicited perspectives most often provided as statements that did not include information about why a provider may have viewed a statement as important. We thus are left with an understanding of practitioner-identified ways to change or increase the quality of early intervention without understanding why these ways may have been viewed as valuable or desirable.

Improve Work Environments

In the past decade, many professionals who work in early intervention have experienced significant, and often continual, changes in their work environments. In a recent study, three themes characterized provider views of changes in early intervention: (a) confusing and excessive amounts of documentation and justification, (b) changing

TABLE 3. Categorical Responses and Rank Order of Statements by Years of Employment in Early Intervention

		Yrs. employment in early intervention					
		< 5 Yrs.[a]		5–10 Yrs.[b]		> 10 Yrs.[c]	
Category		Rank	%	Rank	%	Rank	%
Personal employment	1	2 (1)	17.7	1 (0)	19.0	2 (1)	18.0
Service provision	2	4 (2)	10.0	2 (0)	15.3	1 (1)	20.3
Teaming	3	1 (2)	18.1	3 (0)	12.4	6 (3)	5.3
Training	4	3 (1)	11.0	4 (0)	11.7	4 (0)	6.8
Service model	5	6 (1)	5.7	5 (0)	8.0	3 (2)	9.0
Family participation	6	5 (1)	8.7	6 (0)	3.6	5 (1)	6.8

Note. *N* = the total number of responses in all categories made by respondents in each experience group. Percentages are calculated by dividing the total number of responses in a category by the total number of responses made by individuals within each experience group.
[a]*n* = 299. [b]*n* = 137. [c]*n* = 133.

TABLE 4. Categorical Percentages and Rank Order by Caseload Size

		Caseload size							
		< 25[a]		26–35[b]		36–39[c]		> 40[d]	
Category		Rank	%	Rank	%	Rank	%	Rank	%
Personal employment	1	1 (0)	15.5	1 (0)	28.2	3 (2)	12.8	1 (0)	29.5
Teaming	2	4 (2)	12.0	2 (0)	15.4	1 (1)	17.9	2 (0)	22.7
Service provision	3	2 (1)	14.1	3 (0)	12.8	2 (1)	15.4	3 (0)	11.4
Family participation	4	5 (1)	8.2	6 (2)	2.6	4 (0)	12.8	6 (2)	0.0
Training	5	4 (1)	12.7	5 (0)	5.1	5 (0)	2.6	5 (0)	2.3
Service model	6	6 (0)	7.0	4 (2)	12.8	6 (0)	0.0	4 (2)	6.3

Note. *N* = the total number of responses in all categories made by respondents in each caseload group. Percentages are calculated by dividing the total number of responses in a category by the total number of responses made by individuals within each caseload group.
[a]*n* = 440. [b]*n* = 39. [c]*n* = 39. [d]*n* = 44.

state and county rules governing the practice of early intervention, and (c) shifting from salaried to fee-for-service payment systems (O'Neil & Palisano, 2000). Perspectives about changes in early intervention practices provided by respondents in this study reflect a similar emphasis. A majority of the statements made by practitioners of all disciplines and with all levels of experience related to their work environment. Decreasing required paperwork, increasing technology use, reducing caseload size, and increasing compensation and/or payment for work were four themes that reflected desired changes in their work environments.

That paperwork requirements are frustrating and not viewed by practitioners as rewarding or necessary comes through clearly in the comments made about this issue. Several respondents made statements labeling paperwork as "repetitive," "convoluted," and "unnecessary"; however, practitioners appear to hold a view that technology, specifically cell phones and laptop computers, would have a positive impact—increasing efficiency in communication and, in the case of cell phones, providing some measure of safety. Desired reductions in caseload size may also solve the necessity of balancing the many demands of the work environment. One assumption may be that a practitioner with a smaller caseload size has more time to spend directly with families and children and on related tasks such as paperwork and communication.

Statements relating to the theme of "more money" may reflect practitioner perspectives on fee-for-service billing systems on their work. Although some practitioners' perspectives reflected a simple desire for increased compensation, most provider statements related to specific issues of billing within a fee-for-service system, such as payment for cancellations, scheduled but missed visits, or travel time. Providing all early intervention services with the full frequency listed on an IFSP is an ongoing challenge due to reasons associated with a system, its practitioners, or the families and children who receive services (Kochanek, 2001). A review of 6,000 IFSPs in Indiana, the only state where these data have been collected and analyzed, indicated that approximately 55% of services listed on an IFSP were actually provided (Perry, Greer, Goldhammer, & Mackey-Andrews, 2001).

Provide More Services

Interestingly, many professionals attribute pressure for increased services to parents, referring physicians, or legal entitlement requirements (e.g., McWilliam, Tocci, & Harbin, 1995). The perspectives of provider respondents in this study differed based on discipline and on years of experience in early intervention. Occupational and physical therapists and speech–language pathologists made fewer statements about increased services than did special instructors, service coordinators, and family support coordinators. Family support coordinators—parents of children with disabilities—made the largest percentage of statements supporting increased services, perhaps reflecting a parent perspective discussed by R. A. McWilliam (1999) of wanting to provide and try anything possible to help a child. The percentage of statements supporting increased services increased by years of experience in early intervention. Those who had worked the longest, professionals with 10 or more years of early intervention experience, made almost twice as many statements supporting more services than professionals who had worked fewer than 5 years.

Increase Opportunities for Teaming and Collaboration

When services were provided in center-based early intervention settings, practitioners had both formal and informal opportunities to discuss and collaborate about services being provided for children and families. To a large extent, informal opportunities have evaporated as professionals have lost their physical base of working together. Formal opportunities that need to be systematically built into the early intervention service system are often left to chance and do not occur because providers may not be paid for teaming or may view themselves as not having time for teaming due to high caseloads (Bruder, 2000). Perspectives about teaming from this respondent group reflected a high value for both group team meetings and situations where two or more professionals would work together in the home with a family and child. Provider statements also suggested ways of improving communication through methods other than face-to-face meetings. Occupational and physical therapists and speech–language pathologists made almost twice as many statements related to teaming and communication than did other discipline groups. When the percentages of statements about teaming were viewed by experience groups, it was discovered that the largest was made by those with fewer than 5 years of experience and the smallest by those with more than 10 years of experience.

Change Training Opportunities

Two years prior to completing this survey, requirements for ongoing professional development were implemented by the local Part C program under which these respondents were employed. Furthermore, these respondents were working in a state that had no requirements for continuing education for teacher certification or for maintaining therapy licenses, nor was continuing education a requirement for working in the state's early intervention system. Practitioner perspectives about training varied.

Some statements reflected a desire to eliminate or reduce training requirements, but a greater number of statements suggested preferences for choice in training or for particular types of training content or formats. There was little difference in the percentage of statements reflecting training by discipline; those with more than 10 years of experience made fewer statements than did professionals with less working experience in early intervention.

Return to Center-Based Services

The concept of natural environments has been discussed by a number of authors who have emphasized that the concept does not equate to a simple change of service location from an early intervention center to the home environment (e.g., Bricker, 2001; Campbell, 2000; Hanft & Ovland-Pilkington, 2000; Shelden & Rush, 2001). Others have emphasized the learning opportunities that occur for infants and young children within the context of naturally occurring activities in settings where families spend time (e.g., Dunst, 2001; Dunst, Trivette, Humphries, Raab, & Roper, 2001). Despite the fact that practitioners in this study had been providing services in home environments for more than 3 years, their statements supported a return to center-based services for all infant–toddlers, for children of particular ages, or for those who lived in families with particular characteristics (e.g., with working mothers). This perspective was held almost equally by all discipline groups, but practitioners with more than 10 years of early intervention experience made a greater percentage of statements supporting this model. These more experienced professionals may have worked within a center-based model before the system had addressed the natural environments requirement by providing all services in home settings.

Increase Parent Participation in Services

All disciplines, with the exception of occupational therapists (who had a higher percentage of statements about parent participation than did other discipline groups), suggested that parents should complete training in a variety of areas, including child development and parenting; some practitioners stated that participation in training should be required. Practitioners also expressed beliefs that parents should be more involved during home visits, should be more accountable and responsible, and should demonstrate more follow through. Practitioners with fewer than 5 years of experience and those with caseloads of more than 40 families/children made a higher percentage of statements regarding parent participation than did other groups. The statements that characterize this theme may reflect both practitioners' limited understanding of family-centered approaches or a discontinuity between what professionals expected to have happen in their interactions with families and what actually occurred. Some practitioner statements addressed this possible discontinuity by assigning both issues and solutions to parents. For example, statements such as "parents who want and participate in service" or "more follow-through by parents" seem to reflect a desired "solution" for parents to change rather than a need for professionals to improve their practices in order to successfully involve even the most challenging families.

Implications for Practice

Federal and state policymakers, researchers, practitioners, and families of children with disabilities have been involved for the past 15 years in establishing the Part C early intervention system. After 15 years of policy mandates and court rulings, research and discussion of best practices, training and retraining of professionals, changes of services from center-based to home- and community-based settings, and use of Medicaid and other third-party payers for financing, early intervention service provider perspectives on ways to make the early intervention system one of quality, as a whole, reflect different emphases than recommended practices (Dunst, 2000). In discussing the limited adoption of family-centered models, Bruder (2000) identified four areas of concern: research-to-practice gap, status of training in early intervention, complexity of Part C service requirements, and the attitudes of professionals. Furthermore, she suggested that researchers and developers "may erroneously assume that practices will be unquestionably embraced and wholeheartedly implemented by practitioners" (p. 109). The perspectives of practitioners described in this article suggest that many early intervention professionals are not likely to unquestionably embrace or wholeheartedly implement practices, such as family-centered care or use of natural settings, recommended within the field of early intervention (e.g., Sandall et al., 2000). The "wish" statements of this group were in many ways discordant with a family-centered model and may have been a response to the number of changes experienced in their work environment. The phrasing of the question as "three wishes" may have been interpreted and responded to from a personal perspective on what might help them perform their jobs more effectively.

Perhaps an additional area of concern centers on the knowledge that researchers, developers, and preservice or inservice faculty have about the values and beliefs held by practitioners and the extent to which they consider these perspectives when designing ways of translating research outcomes into everyday practice. For example, if practitioners believe that more services are better or prefer using center-based models to providing services in children's homes and communities, their practices with

children and families will not likely be affected by training in best practices. Similarly, when practitioners view family participation as a series of statements about what parents with children in early intervention *should* do, providing services in ways that fully implement principles and practices of family-centered intervention is not likely to happen without changes in perspective.

For the most part, with the exception of teaming, statements made by practitioners about the changes they would like to see in early intervention did not center on practices that relate directly to the qualitative aspects of services. The framework though which discipline-specific services are provided (e.g., family-centered models, teamwork) or the context of intervention (e.g., naturally occurring activities and routines, interactions with families) are examples of best practices that directly affect families and children. Practitioners' perspectives instead focused heavily on the logistics of providing services and reflected perspectives generated from the experiences they face on a day-to-day basis. Researchers in adult education have consistently emphasized a life-centered orientation to learning how to use curriculum designs that value and build on the adult learner's experiences and center on the learner's needs and interests (e.g., Knowles, 1980). The perspectives of practitioners in this study reflect neither a need to know about nor an interest in early intervention best practices; instead, their perspectives suggest that the significant challenges of day-to-day practice need to be addressed both separate from and within a context of adult learning. It is almost as if practitioners have neither the time nor the energy to devote to changing their practices when their perceptions are that their time is spent in irrelevant activities such as paperwork, with families who may not conform to their expectations, and under working conditions that are viewed as less than optimal.

In a number of recent articles, authors have reflected on the extent to which families and children actually receive best or evidence-based practices and have suggested changes to ensure that optimal practices are a reality for all families and children (e.g., Bricker, 2001; Bruder, 2000; Dunst, 2000; R. A. McWilliam, 1999). In retrospect, the past 15 years of implementing a publicly supported, national early intervention system can be characterized as having included considerable change at both the local and state levels. These changes may have affected service providers more dramatically than families and children by creating a myriad of logistical issues with which providers must contend on a day-to-day basis. The challenges in once again redirecting and changing these systems into ones where all children and families receive optimal early intervention are enormous.

The comic strip character Pogo often lamented, "I have seen the enemy and it is us." Perhaps his astute comment characterizes the current climate in early intervention. If we can see the infrastructure of the early intervention system as being largely established, an activity that has required considerable effort over the past 15 years, we can move on to tackling the more complicated issues that require attention and innovation if we are to ensure best practices for all children and families. The multiple-discipline practitioners who interact daily with families and children are the essence of early intervention. The values and perspectives of these professionals come between research and practice and influence the impact of activities designed to bridge the research-to-practice gap. Strategies such as assisting practitioners in identifying and addressing issues of discontinuity between their expectations and their day-to-day experiences at their jobs (Thorpe & Sanchez, 1999), reflecting on and solving practice issues (P. J. McWilliam, 2000), or changing practitioners' perspectives through specially designed training activities (Campbell et al., 2001) show promise for enabling practitioners to implement best practices in their day-to-day interactions with children and families. The total responsibility for ensuring optimal service provision, however, does not rest solely on the shoulders of practitioners but, together with families, must be a joint commitment of state and local policymakers, researchers, developers, and trainers. When policymakers join together with researchers and developers to implement systems that reflect not only sound infrastructures but also evidence-based practices, resources can be directed systematically toward ensuring positive outcomes for children and families. ◆

AUTHORS' NOTE

The information in this study was provided by practitioners who work every day with children and their families in early intervention. A total of 40 of their supervisors functioned as team leaders for a training activity and were provided with technical assistance by seven early intervention professionals who were employed through the Philadelphia Teaching and Learning Collaborative, a professional development program developed by the Office of Mental Retardation Services of the City of Philadelphia and funded both through that agency and through the Commonwealth of Pennsylvania's Office of Mental Retardation. We are grateful for the support of these many individuals, each of whom played an important role in enabling us to gain understanding of the perspectives of early intervention service providers.

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Appendix: Representative Sample Statements Reflecting Each of the Themes About Changes in Early Intervention Practices

I. Improvements In Personal Employment (114)

A. Less Paperwork (26)

- More time for paperwork or less of it
- Eliminate some of the repetitive paperwork
- Eliminate convoluted paperwork process and allow us to do work
- One form that says it all

B. Cell Phones and Use of Computers (25)

- Cell phones for staff for safety and communication
- Data systems and laptops
- All forms on computer
- Use laptops to make communication easier

C. More Money (46)

- Better pay/wages; more money so I can quit my other job
- Salary should reflect hard work, training, and stress of job
- Incentives for being a service coordinator
- Get paid for cancellations and missed visits
- Reimbursed for travel time at different rate and for parking
- Special instructors to be paid like school district teachers
- Company cars for staff travel to family homes
- Provide incentives to attract and keep qualified staff

D. Caseload Size (17)
- Smaller caseloads
- Maximum caseload of 30 to 35, no more
- Smaller caseloads to allow time for collaboration
- Lighter caseloads to increase quality and creativity
- Lessened caseloads to monitor services more effectively

II. Family Participation (45)

A. Opportunities for Parent Education and Training (21)
- More training for parents
- More family education about the role of EI
- Parent participation in child development training
- Parents get training at home on child development
- Families to attend mandatory training once a year
- Workshops about each discipline for parents
- Parents to be trained to participate in therapy with their child
- Make parents a part of this through workshops and teaming

B. Parent Participation in Home Visiting (13)
- Involve more parents
- More support for parent participation
- More parent participation during home visits
- Parents who want and participate in service

C. Parent Involvement in Services (11)
- Have a system for families that repeatedly do not show for scheduled visits
- Allow agencies to terminate services when parents are unresponsive
- Hold parents more accountable
- Notify us about cancellations
- More follow through by parents

III. Service Provision Through Traditional Models (42)

- Center-based opportunities for parent–child participation
- Go back to center-based programs
- Under 3 years of age go to center-based programs when appropriate
- Center-based programs for 2-year-olds
- Center-based services for working mothers
- Center-based services for a child who is deaf or hard of hearing
- One agency for all services for a child
- Teams come from one agency
- Team from one agency to enhance communication and scheduling

IV. Increased Provision of Services (85)

- All potentially eligible kids would enter the system
- More providers
- Staff and services to service every child who needs services
- All services needed would be granted
- Children receive all services they need
- More services provided when therapist feels it is beneficial
- 2 times per week sessions for 1.5 hours
- Pool of "substitutes" so that services can continue when someone is sick
- EI services for foster care kids improved
- Social workers to help families with difficult issues faced
- More qualified EI providers to serve various ethnic groups
- Feeding therapy
- More speech now

V. Teaming/Improved Communication (84)

- Better means of communication among members
- For teams to meet
- Team members to see each other monthly to exchange information
- More co-treatments with different disciplines for child's benefit
- More teaming, regardless of what agencies you are from
- More team meeting time
- More timely communication
- Make a communication book available for all team members
- After team knows family, meet and discuss goals and concerns again
- Create infrastructure to support team building and consultation

VI. Professional Development and Training (65)

A. Elimination or Alteration of Training Requirements (25)
- No more required training
- Not to have to do training
- Less time in mandated training
- Lessen the number of training hours

B. Personal Control Over or Changes in Training (40)

- More independence in choosing training topics for credits
- More team meetings like projects and fewer large-group trainings
- To continue the team projects
- Team-based training
- More team approach and learning
- More opportunities to work in smaller groups
- Have different training based on experiences
- Mandatory training in behavior and in multiple disability
- Training on specific therapeutic strategies
- Better understanding of medically complex child and family needs

VII. Other (151)

- More parents care
- Child receives all services by love not duty
- Big fund to help poor families get what they need for kids
- Make EI more understood
- Expanded catchment area
- Streamline decisions
- Timeframes
- Providers let go of boundaries and the need to be right
- Have children meet one another at a picnic
- Kit that includes all I need to administer services in a clinic setting

Note. The numbers in parentheses equal the total number of response statements included in the theme area.