Abstract
The extent to which direct mailings to parents of young children was effective in increasing self-referrals to an early childhood intervention program was examined. Three postcards describing the early intervention program and the services and benefits of early intervention were mailed to 14,000 households with preschool-aged children in a six county area, one each week for three consecutive weeks. A multiple-baseline design across counties was used to assess the effectiveness of the intervention. Findings showed that self-referrals increased in five out of the six counties constituting the focus of the mailings.

Introduction
The study described in this Snapshots was designed to evaluate the effectiveness of direct mailings to parents of young children for increasing self-referrals to an early childhood intervention program. Specially designed postcards were used to inform parents about the early childhood intervention program and to describe the services and benefits of early childhood intervention for both young children and their parents. Findings from two sources of evidence were used to develop the format and content of the postcards: the characteristics of effective printed materials and the ways in which messages are framed to influence changes in people’s behavior (Dunst, Lucas, & Click, 2004).

The study was conducted as part of research at the Tracking, Referral and Assessment Center for Excellence (TRACE). The major goal of TRACE is to identify and promote the use of evidence-based practices for improving child find, referral, early identification, and eligibility determination of infants, toddlers, and preschool children with disabilities or developmental delays eligible for IDEA Part C early intervention or Part B (619) preschool special education (Dunst & Trivette, 2004; Dunst, Trivette, Appl, & Bagnato, 2004).

Research indicates that the characteristics of printed materials matter a great deal if the materials are to influence people’s decision making and action (Paul & Redman, 1997; Paul, Redman, & Sanson-Fisher, 2003). Printed materials, including, but not limited to, brochures, leaflets, fliers, and postcards that have both tailored messages and targeted audiences have been found to be more effective than nontargeted materials in influencing people’s knowledge and behavior (Kreuter & Strecher, 1996; Kreuter, Strecher, & Glassman, 1999). The extent to which a targeted public awareness campaign increased parents’ self-referrals to early childhood intervention was considered important because it was a relatively simple intervention but had the potential for reaching a large targeted audience.

Targeted, or tailored, messages are an important feature of effective public awareness campaigns (Skinner, Campbell, Rimer, Curry, & Prochaska, 1999). “Tailored messages” refers to the manner in which a message is communicated to and designed to influence or persuade a person to take action or change behavior. Messages can be communicated or framed in ways that elicit feelings about negative consequences of not taking action (loss framed messages) or they can emphasize the positive benefits of taking action (gain framed messages). The gain framed messages have been found to be more effective in appealing to people’s preferences and reasons for changing their behavior (Lee & Aaker, 2004).

The intervention constituting the focus of this Snapshots used gain framed messages for informing parents of young children about one early childhood intervention program and for describing the services, supports,
and resources available from the program. The study was conducted at the Family, Infant, and Preschool Program (FIPP) located in western North Carolina (www.fipp.org). FIPP is an early childhood intervention and family support program serving young children birth to 8 years of age (Dunst & Trivette, 2005).

Method

Postcards

The three postcards used to increase parent self-referrals to FIPP had similar features, in order to promote program recognition by the recipients, as well as postcard-specific information describing different aspects of FIPP. The front side of all three postcards included the same photograph of a family, the name of the early childhood intervention program, and the FIPP logo. The front also included the same message about how FIPP staff treat and support families and also summarized staff backgrounds and qualifications. The back of the three postcards each included different information about FIPP, as well as the program name, FIPP logo, and telephone numbers to call for more information. Copies of the postcards are included in the Appendix.

The first postcard projected a positive image of FIPP by focusing on the program’s strengths-based approach to working with children and families and by informing recipients about the types of supports and resources available from the program. The second postcard included information about the professional backgrounds and years of experience of the FIPP staff and listed the kinds of services, supports, and early childhood intervention activities used by the program. The third postcard compared and contrasted FIPP with other early childhood and family support programs highlighting the broad-based range of services, supports, and resources provided by the program.

Participants

The targeted audience for the study was households with one or more children birth to 5 years of age in a six county area in western North Carolina. A mailing list of just over 14,000 households was obtained from a commercial direct-mailing company.

Procedure

The households constituting the focus of the direct mailings resided in a six county area. The counties were paired based on their population sizes and were divided into small-, medium-, and large-size counties for the purposes of evaluating the effectiveness of the intervention. The numbers of households with young children birth to 5 years of age in the three county groupings were 1,710; 4,162; and 8,166 respectively. The small- and medium-size counties were ones currently served by FIPP whereas the large counties were the ones targeted for program expansion.

Research Design

A multiple-baseline design across counties was used to assess the effectiveness of the intervention. Parent self-referrals were monitored for 4 weeks prior to the first mailing and for a total of 100 days in all the counties. The order of postcard mailings was done randomly where the first mailing was sent to households in the small-size counties, the second mailing to households in the medium-size counties, and the third mailing to households in large-size counties. The intervention phase for each mailing was considered 3 weeks corresponding to the time period during which the mailings were sent. The dependent measure was the cumulative number of self-referrals to FIPP.

Data Analysis

Analysis by visual inspection supplemented by three interrupted time series regression analyses were used to ascertain the effectiveness of the intervention for promoting parent self-referrals to FIPP. Increases in the number of self-referrals following the postcard mailings were expected to establish the effectiveness of the public awareness intervention. Cost effectiveness was ascertained by calculating the per household and per referral costs for producing and mailing the postcards.

Results

Intervention

Figure 1 shows the multiple-baseline design results. The intervention was effective in both the medium-size and large-size counties where the number of self-referrals increased following the postcard mailings. The interrupted time series regression analyses produced results confirming a statistically significant pattern of increases in referrals (Table 1). In both sets of analysis, the regression coefficients for the intervention phases were significantly different than those for both the baseline and return-to-baseline phases of the study.

The intervention was not found to be effective in the small-size counties, due, in part, to the fact that there was an upward trend in the number of self-referrals during the baseline phase of the study. We subsequently learned that staff from one FIPP program (Early Head Start) in one of the small counties had been recruiting families during the time baseline data were being collected. To ascertain if this was the reason for the findings shown in Figure 1, we examined the self-referrals separately in each small county and found that in the county recruiting families for the Early Head Start Program, there were
seven self-referrals but in the other county there was only one self-referral during the baseline, confirming our suspicion.

**Cost Effectiveness**

The extent to which the intervention was cost effective was determined by calculating the per household and per referral costs for designing, printing, and mailing the postcards. The production and mailing of the postcards cost $13,603, which resulted in a per household cost of $0.97, or $0.33 per postcard. The intervention resulted in 67 self-referrals during the course of the study which translated into a per self-referral cost of $203.

**Discussion**

Findings from the study described in this *Snapshots* indicated that a rather simple direct-mailing campaign was effective in increasing the number of parent self-referrals to an early childhood intervention program. The direct mailing was especially effective in the counties targeted for program expansion. Prior to the intervention, no self-referrals were made to the early childhood intervention program, whereas 30 self-referrals were made during the 3-week intervention phase in those two counties.

A concerted effort was made as part of the design and implementation of the direct-mailing campaign to ensure the intervention was cost effective. Results showed that it cost less than a dollar per household to design, produce, and mail the postcards. Additionally, it cost just $200.00 per household to promote the self-referrals to the early childhood intervention program. These cost figures clearly indicate that the investment in designing and implementing the direct-mailing campaign were well worth the expenditures.

The approach to designing the postcards used in this study should prove useful to other early childhood intervention programs who want to increase self-referrals. The postcards were carefully designed using evidence-based findings to ensure the likelihood of the effectiveness of the direct-mailing campaign. As we described in the introduction, we used research evidence about targeted messages and tailored printed communication to describe key aspects of the early childhood intervention program to the parents receiving the postcards. What we were not able to determine was whether or not certain features of the postcards were more important than others in influencing parent behavior.

Finally, we note several lessons learned from this study as well as other investigations and initiatives at TRACE. One lesson learned is that referrals of any kind from any referral source cease or lessen once an
intervention is stopped or terminated (see Figure 1). The other lesson learned is that promulgating referrals by primary referral sources needs to be done on an ongoing basis if referrals are likely to continue to be made for early childhood intervention. One-time mailings or one-time contacts with primary referral sources simply do not work. This is consistent with research showing that repeated follow-up contacts increase the effectiveness of interventions influencing behavior change (see e.g., Clow, Dunst, Trivette, & Hamby, 2005).

Acknowledgments

Appreciation is extended to Abigail Underwood for typing, Teresa Imfeld for editing, and Kaki Roberts for final layout of the manuscript.

References


Authors

Carol M. Trivette, Ph.D., is Co-Principal Investigator of the Tracking, Referral, and Assessment Center for Excellence (TRACE) and Research Scientist at the Orelena Hawks Puckett Institute, Morganton, North Carolina. Dathan Rush, CCC-SLP, is Associate Director of the Family, Infant and Preschool Program in Morganton, North Carolina (dathan.rush@ncmail.net). Carl J. Dunst, Ph.D., is Co-Principal Investigator of the Tracking, Referral and Assessment Center for Excellence (TRACE) and Research Scientist at the Orelena Hawks Puckett Institute in Asheville, North Carolina (dunst@puckett.org). M’Lisa Shelden, Ph.D., P.T., is Director of the Family, Infant and Preschool Program in Morganton, North Carolina (mlisa.shelden@ncmail.net).
Appendix

Postcard Format and Content

A relationship with us can help you recognize your strengths as a parent. FIPP is the only program in western North Carolina where your child can receive the newest, research-based, specialized treatment and therapy approaches for children with disabilities or developmental delays. Get your questions answered at FIPP about discipline, child development, early learning, school readiness, family activities and parenting. FIPP educators, therapists and researchers travel the world teaching others how to work with children and their families.

Most importantly, FIPP listens to families and treats them with dignity and respect at all times.

We show families how to build better lives. Call us to find out more.

Call to find out how FIPP can help your family.
(828) 433-2661 or 1-800-822-3477
FIPP has helped many families just like yours. We invite you to learn more about all of our free services other families like yours have taken advantage of.
YOUR FAMILY DESERVES THE BEST. FIPP HAS A LOT TO OFFER...

LIKE SPECIAL CHILDREN, PEOPLE DON'T ALWAYS SEE WHAT FIPP HAS TO OFFER.

Families who needed FIPP's help love the attention they get. They love the respectful service they receive, the caring staff, and the experienced teachers and therapists that all show their support by helping families with the information and guidance they need the most.

SEE HOW FIPP CAN HELP YOUR FAMILY...

FIRST LIKE SPECIAL KIDS, WE HAVE A LOT TO OFFER. WE CAN HELP YOU HELP YOUR CHILD LEARN AND GROW.

FIPP has over 30 years of experience working with children with disabilities or developmental delays and their families. FIPP listens to families' priorities for their children. FIPP has 50 educators, therapists, and nurses with an average of over 20 years of experience working with children and families. We show families how to build better lives.

- FREE occupational, physical, and speech therapy
- FREE individualized early childhood education, special education, and therapy services
- FREE child developmental evaluation and assessment
- FREE early childhood health and developmental screening
- FREE early childhood and preschool learning activities
- FREE parent support groups
- FREE monthly newsletter with parenting tips, resources, calendar of events
- FREE parent-child playgroups and drop-in playtime

FIPP has helped many families just like yours. We invite you to learn more about all of our free services other families like yours have taken advantage of.

Call to find out how FIPP can help your family.
(334) 433-2661 or 1-800-822-3477
**YOUR FAMILY HAS QUESTIONS ...**

**SINCE 1972 FIPP HAS THE ANSWER**

LIKE SPECIAL CHILDREN, PEOPLE DON'T ALWAYS SEE WHAT FIPP HAS TO OFFER.

Families who need FIPP's help lose the attention they get. They lose the respectful service they receive, the caring staff, and the experienced teachers and therapists that all show their support by helping families with the information and guidance they need the most.

SEE HOW FIPP CAN HELP YOUR FAMILY...

---

JUST LIKE SPECIAL KIDS, WE HAVE A LOT TO OFFER. WE CAN HELP YOU HELP YOUR CHILD LEARN & GROW.

Your family deserves the best. Compared to other programs who work with young children with disabilities or developmental delays and their families, no other program compares to FIPP.

Call to find out how FIPP can help your family.

(828) 433-2661 or 1-800-822-3477

---

<table>
<thead>
<tr>
<th>FIPP</th>
<th>Child Education Centers</th>
<th>Other Early Childhood Programs</th>
<th>Other Family Support Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serves ALL Families and ALL Children</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nationally Certified Family Support Program</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services at No Direct Cost to ALL Families</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Development Evaluations</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Occupational, Physical, and Speech Therapy</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Nationally and Internationally Recognized as a Program Leader</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>