Brief Approaches to Educating Patients and Parents in Primary Care

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ABSTRACT. Purpose. Pediatricians are encouraged by the American Academy of Pediatrics and Bright Futures guidelines to use well-child care as an opportunity to promote learning and development, encourage positive parenting practices, help children acquire behavioral self-control, and enhance the well-being of children and their families. Such counseling can consume considerable provider time. In an era of dwindling resources for health care, there is pressure to deliver services as efficiently and effectively as possible. Thus, the purpose of this article is to view methods for patient and parent education that are not only effective but also brief.

Design. Review of 114 articles on issues relevant to patient education.

Results and Conclusions. Parents appear to respond best to information that focuses on their specific area of concern. Media, such as advertising campaigns or office posters, can be helpful for broadening parents’ range of interests. In response, verbal suggestions are effective for conveying brief, concrete information when parents are not stressed. Written information should be added for addressing more complex issues. Modeling and role-playing appear especially useful when confronted with problematic parenting or child behavior. These approaches, if selected wisely and applied well, offer families needed assistance that has proven effectiveness in improving children’s and families’ health and well-being. *Pediatrics* 1998;101(6). URL: http://www.pediatrics.org/cgi/content/full/101/6/e10; patient education, anticipatory guidance, in-office counseling.

ABBREVIATIONS. AAP, American Academy of Pediatrics; TIPP, The Injury Prevention Program.

Approximately 30% of parents worry about their children, even though they are developing and behaving within the broad range of normal.1 This phenomenon offers a teachable moment for guidance from health care professionals in which parents may welcome the opportunity and benefit from its content.2–5 Because some concerned parents have children who are at risk for disabilities and school dysfunction,1 counseling is an important component of promoting optimal development.6 Such counseling also is one of the central reasons for health supervision visits. Indeed, various committees of the American Academy of Pediatrics (AAP)7–9 and the Bright Futures guidelines10 encourage providers to use well-child care as an opportunity to promote learning and development, encourage positive parenting practices, help children acquire behavioral self-control, and enhance the well-being of children and their families.

These exhortations give rise to two major questions. First, what are the best and most effective ways to counsel families? Second, how can this be accomplished within the time constraints of busy clinics? Although visit length appears to be increasing in recent years (from 10.3 minutes in a 1983 study to 20.4 ± 6.7 minutes in a 1997 study), as does the time devoted to anticipatory guidance (an average of 2.4 minutes [12.4% of visit time]), compared with 0.9 minutes (8.4% of visit time),11–14 overall, the time spent on well-child care in general and on counseling in particular is still quite modest. This suggests that pediatricians need information on efficient approaches to patient education that are minimally time-consuming.

Accordingly, the goal of this article is to review research on brief and effective methods in patient education and counseling. Described here are several different methods by which health care professionals can counsel and educate parents while minimizing the time required (and the ennui that inevitably ensues from repeatedly giving advice on the same topics). These methods include verbal suggestions, videotapes, information handouts, hand-held health records, role-playing, and modeling. Each approach is described below, along with information about efficacy and optimal application. To identify the various methods, we reviewed 114 studies via searches through the 1980 to 1997 Medline and Psychinfo databases. We paid particular attention to research using randomized control group designs on pediatric populations. Search terms included “patient education,” “parent training,” “information handouts,” “video,” “recall,” “literacy,” “role-playing,” and “group well visits.”

VERBAL SUGGESTIONS

Clear, spoken advice is a powerful agent for helping parents acquire new knowledge. However, specific rather than general advice appears better for helping families to learn and apply new information.15,16 For example, concrete suggestions on behavior management (offered by telephone to 27 mothers of infants between 1 and 5 months of age) were found to be more effective than supportive counsel-
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Standardized written instructions also have been shown to be highly effective in improving parents’ knowledge of various child health issues. For example, abusive parents who watched a series of videotapes about nonabusive solutions to common parent–child conflicts showed significant gains in knowledge of alternatives to physical punishment, understanding of normal child development, and insight into children’s misbehavior.

The setting and speakers used in videotapes appear to be particularly important, at least for some groups of parents. Mothers who watched a short culturally sensitive videotape (meaning that the speakers were other African-American, low-income, adolescent mothers) of best practices in infant development stimulation and feeding were far more likely than were control group mothers (those instructed verbally by white professionals) to communicate with their infant during feeding. Other studies also support the effectiveness of videotapes when they are culturally sensitive.

INFORMATION HANDOUTS

Information handouts are less expensive and generally more available than videotapes. One study compared videotaped counseling to information handouts. Both were found to be equally effective in improving parents’ disease-specific knowledge (of cystic fibrosis in a study of parents seeking well-child care in a university hospital). Information handouts have been demonstrated to be effective in improving outcomes such as compliance, satisfaction with care, and parent knowledge. For example, in a study of 11,000 patients given information handouts on tetanus vaccines and then followed for 7 months, vaccination rates increased threefold. Handouts also increased compliance with treatment recommendations. Providing parents written information on fevers and urinary tract infections decreased by half the number of inappropriate telephone calls and reduced by one half to three fourths
unnecessary office visits. In a comparison of oral versus written information, parents receiving written information were better able to follow through with medical instructions.

Because parents are adult learners, patient education studies conducted in general practice settings also shed light on the impact of written information. One such study found that adult patients usually appreciate written information and appear more satisfied with care when such information is made available. A study of >4000 patients in Great Britain showed that 97% read information handouts and 70% retained them for more than 12 months. Furthermore, those given handouts 1) were more satisfied and acquired more knowledge (of medication side effects); 2) were not more likely to report spurious side effects; and 3) had greater knowledge of the medications’ purpose and dosing (although they were not better able to recall the name of the medication). Another study showed that informational leaflets significantly decreased anxiety, facilitated patient–staff interactions, and increased satisfaction with patient care better than verbal instruction alone.

Although it has been demonstrated clearly that information handouts can be effective educational tools, an important issue is the best way of sharing them with parents. Should handouts be left in waiting rooms, given to parents without additional instruction, or carefully discussed during the office visit? Research clearly supports the latter approach. One study showed that in the United Kingdom, adult patients rarely read or took home information handouts left in waiting areas, although they were found to read and recall short messages on waiting room bulletin boards. In a related study, information handouts sent through the mail in conjunction with a media campaign (to reduce risk for malignant melanoma) were more effective than were informational handouts mailed alone. This suggests that patient awareness of and interest in a particular topic is essential for handouts to be effective teaching tools, emphasizing the concept of a teachable moment.

A personalized approach to disseminating information handouts appears most effective. In one study, patients learned, recalled, and understood considerably more information about options in cancer treatment when they had follow-up contact with an oncology nurse along with written literature. In another, computerized instruction that allowed patients to learn at their own pace, lead to improved health status and communication with health care professionals. A study of efforts to discourage smoking in 2901 mothers of newborns compared the effectiveness of information packets together with oral instruction from a pediatrician to written information without oral instruction. The combined method produced higher quit rates and lower relapse rates. Similarly, parents who received counseling from their child’s pediatrician along with written information and test results were more likely to smoke outside their homes than were parents who received counseling only.

One noteworthy approach to personalizing handouts is The Injury Prevention Program (TIPP) from the AAP. This package includes a parent survey designed to highlight areas of informational needs. Once needs are identified, specific TIPP information handouts and other materials can be selected. Perhaps because individualization is an inherent part of the TIPP, the majority of studies conducted have shown substantial success in improving parents’ knowledge and implementation of safety measures.

Information handouts seem especially helpful when the topic is complicated and involves teaching skills that have multiple steps. One study showed that written leaflets given to parents on a waiting list for individual counseling services were as effective as individual counseling for eliminating sleep problems. In another study, a 10-page handout on behavior modification skills decreased oppositional behavior in children with attention deficit hyperactivity disorder and reduced parents’ need for multiple training sessions.

Information handouts also appear useful in building parenting skills longitudinally. In one study, handouts were sent periodically at specific ages to parents after the birth of their child. The newsletters addressed those parental concerns most common to children according to their age and emphasized knowledge about development, parenting, health care, and emotional well-being. More than 800 parents were recruited for satisfaction and knowledge surveys, and >70% reported improvements in knowledge about development, parent–child relationships, and parental self-confidence. Similarly, activity sheets—age-paced according to the US well-visit schedule and designed to help parents promote their child’s developmental progress in language, motor, and self-help/socialization—were rated highly by parents, many of whom reported that the activity sheets improved their knowledge of development and their willingness to discuss developmental issues with their primary care provider.

Several conclusions can be drawn from the above: 1) parents and patients appear to take in written information best when the topic is of interest and concern; 2) written information is a more effective teaching tool if accompanied by a personalized oral message from a health care professional; and 3) information handouts can be used to teach complicated sequences of skills.

PARENT-HELD RECORDS

Parent-held records are widely used in Europe and Australia and are becoming increasingly popular in the United States. Such records are used to note immunizations, provide schedules of visits for health surveillance, and inform parents on a range of issues such as nutrition, child development, physical growth, and behavior. High levels of parent and provider satisfaction are associated with the use of health records although most parents retain and use their records, this varies substantially according to whether parents received clear instructions to bring their child’s record to each visit. Far more
parents maintained and used records when instructed either orally or in writing.63,64

Despite the popularity of parent-held records and their ability to provide anticipatory information on a range of developmental and behavioral topics, the efficacy of these in preventing or intervening with developmental and behavioral difficulties has not been studied. Some caveats can be drawn from a study demonstrating differences in how parents/patients versus providers perceived health records. Parents/patients tended to view them as a personal document for their own reference, whereas physicians tended to view records as a communication and management tool.62 In any case, it is probably safe to view parent-held records as we would any other form of written information and assume that it is best to highlight critical points via individualized verbal instruction and supportive counseling.

QUESTIONS OF LITERACY, LANGUAGE DIFFERENCES, AND OTHER BARRIERS TO PATIENT EDUCATION

The widespread use and effectiveness of written information in patient education raises questions about literacy, language barriers, and readability. In the United States, ~20% of the adult population is considered functionally illiterate (defined as reading below the 8th-grade level—the difficulty level of most newspapers and digest-type magazines). In one study of low-income elderly adults, mean reading skills were found to approximate the 5th-grade level, equivalent to skills of the average 10-year-old child.65 Another study found that younger adults read somewhat better, at an average grade level of 8.7 (13- to 14-year-old range), but still about five grade levels below their highest complete school grade (for which the mean was 12.1 grades (17- to 18-year-old range)).66 In Louisiana, one of the more impoverished states in the United States, younger adults had average reading levels closer to the high 5th-grade level, whereas adults older than 60 years of age read at the high 2nd-grade level.67 An Australian study showed average reading performance clustered at the 8th-grade level and that two thirds of all information pamphlets were written above the 8th-grade level.68 A US study showed that only 25% of materials produced by the AAP were written for readers at the high 9th-grade level.69 In another study, 15% of patients could not read and interpret a prescription bottle, and 37% could not comprehend dosing instructions.70

Foreign-language barriers affect ~10% of US citizens and substantial numbers of families in the United Kingdom and Australia. Often there is considerable overlap between those who do not speak English and those with limited literacy. Even so, neither language barriers nor illiteracy precludes an interest in information. In one study, non-English speakers expressed frustration with the lack of information written in their primary language.71 Another study showed that almost all patients, whether or not they could speak English or read, clearly wanted more information about a range of topics.72 Thus, the challenge is to determine ways to effectively and efficiently provide patients of all backgrounds with the information they need.

Several studies suggest that one approach to circumventing illiteracy and foreign-language barriers and improving comprehension is to ensure that information handouts are written at or below the 8th-grade level (average 13-year-old reading level) and preferably closer to the 5th-grade level (average 10-year-old reading level). Improving readability typically is accomplished by reducing sentence length and vocabulary, eliminating multiple prepositional phrases, avoiding passive verb tenses, and checking the results with the standard readability formulas found in most word-processing programs.73 An advantage of improving readability is that even literate parents prefer easy-to-read material (eg, when given a choice between vaccine information written at the 3rd- to 4th-grade level vs more sophisticated literature).74 A second approach is to deliver information handouts along with oral guidance. The many studies showing that this combination is more effective than use of information handouts alone suggest a primary mechanism by which illiteracy is circumvented. A perhaps optimistic aside is that many nonreaders or poor readers, much like those who do not speak the primary language of the country in which they live, often know someone who can help them understand written material. A final approach is to have written material translated into other languages for parents who do not speak English.

OTHER TEACHING TECHNIQUES

Modeling appropriate behavior, coaching, and role-playing are hands-on teaching techniques that emulate the “see one, do one, teach one” adage of precepting in medical school and residency training. Many patient educators consider these techniques a form of problem-solving and contend that curricula with this type of orientation lead to improved ability to apply new knowledge, compared with less “hands-on” forms of instruction. Modeling has been shown to improve the ability of residents and medical students to communicate more effectively, develop better interpersonal skills with patients, and intervene when there are signs of drug abuse in patients and parents.75–79 Role-playing and other simulation activities are shown to reduce aggressive behavior, improve social skills, and increase communication skills in adolescents, and to improve children’s knowledge about traffic safety.80–82 Role-playing was found to be superior to written information in improving parents’ ability to identify and report children’s illness.83 Both modeling and role-playing were effective in teaching a broad range of parenting skills.84 Similarly, direct coaching has been shown to help children and parents reduce pain (eg, use a party blower as a distraction technique) or learn such procedures as self-catheterization.85–87

It may appear that role-playing, modeling, and coaching are relatively time-consuming. However, several studies have involved simple and brief interventions with remarkable success. One study looked at the effects of modeling by having a group of parents observe professionals administering rating
scales of development and behavior to children. A second group of parents completed the scales on their own as a parent report tool. A control group did neither. There were no differences between the group who completed rating scales on their own and the group who observed professionals. Both were far more interactive with their infants, and their children had better fine motor skills (1 to 4 months later) than did control group families.88 The researchers concluded that questionnaire completion offers parents a chance to learn about and eventually imitate appropriate behaviors.

The simplicity of these interventions, coupled with the impact that physicians’ suggestions have on patients and families, implies that simply pointing out high-risk parenting behaviors and providing appropriate models and opportunities for practice should be highly effective in improving parenting skills.89 Furthermore, coaching and modeling can readily capitalize on “teachable moments” such as immediately after observing a parent interact with his or her child in a less than desirable manner. Appropriate topics would logically address those behaviors that are visible and demonstrable (eg, showing parents how to promote language development when a child gives an object to his or her mother, demonstrating a better disciplinary technique after a parent is observed punishing a child too harshly, demonstrating how to read to children, etc.). Children themselves can be coached not only in how to tolerate office procedures but also about behavior and development (eg, by asking them to practice obeying their parents, modeling if needed, and then demonstrating for the parent appropriate social reinforcement).

One of the few studies to examine the effectiveness of modeling focused on promoting children’s literacy through parental involvement90—a topic of much interest to health care professionals because of the significant relationship between illiteracy and unhealthy behaviors (eg, illiterate parents are more likely to smoke, lack insurance, be overweight, and not breastfeed).66,91 Accordingly, researchers compared three different approaches: placing volunteers in pediatric waiting rooms who read aloud to patients, having the pediatrician counsel parents about literacy development, and/or providing books for children at each visit.91 Of the three approaches, parents who received books were four times more likely than were other parents to report having read to their child in the last 24 hours or to mention that one of their child’s favorite activities was being read to. Indeed, the authors contend that the primary barrier to literacy-promoting experiences is the absence of books in the home. As an aside, this is exciting because it is one of the easiest barriers to remove—a point demonstrated neatly in this study because the authors solicited book donations from toy companies and other sources. More to the point, it seems unfair to tarnish the reputation of modeling as an effective teaching technique on the basis of this study: how could parents be expected to imitate the example of volunteer readers if they had no books at home? One surely overstated conclusion is that if the behavior we want parents and patients to model requires tools, the tools should be made available.

GROUP WELL VISITS

Some pediatric practices identify small cohorts of families who have children of the same age (eg, 8- to 10-year-olds) and conduct group well visits, usually lasting 1 hour, that cover anticipatory guidance, safety and prevention issues, psychosocial concerns, etc. Physical examinations and vaccinations are provided separately. In a study comparing families randomized to group or traditional well visits, Osborn and Wooley92 found that mothers attending group visits were more likely to attend subsequent well visits and were less likely to seek advice between visits. Although the amount of time physicians spent on group versus traditional well care was identical across conditions, parents participating in group visits received 1 hour of physician time, whereas those in the traditional care received an average of 16 minutes.

The content of visits in group well care focused less on physical aspects of care and more on parenting issues. During group visits, parents were more likely to raise recommended topics from Guidelines for Health Supervision9 and other topics of concern than they were at individual visits.93 Given that only 30% of families have physical concerns at well visits and instead have numerous psychosocial concerns,94 the greater ability of group well visits to address parents’ most pressing issues is an exciting finding. Furthermore, research illustrating the close association between certain parental concerns and childhood problems suggests that enhancing parents’ opportunities to discuss their concerns is advisable.95 Recent research on group well visits showed that children whose parents attended these were as likely as those receiving individual care to be vaccinated and somewhat less likely to use the emergency room between visits.13 Finally, >95% of parents preferred group to individual well visits.92

CONCLUSIONS

Parents appear to respond best to information that focuses on their specific areas of concern. Media such as advertising campaigns or office posters can be helpful for broadening parents’ range of interests. Verbal suggestions can be used alone for conveying brief, concrete information, particularly when parents are not stressed—a condition that deters recall. Written information should be added for addressing more complex issues. Modeling and role-playing appear especially useful when confronted with problematic parenting or child behavior. In selecting among patient education methods, it is helpful to recognize that various outcomes can be expected from each approach. Selection among methods should be made and tailored according to the needs and characteristics of parents and the topic at hand. All approaches, if selected wisely and applied well, offer families needed assistance that has proven effectiveness in improving children’s and families’ health and well-being. Table 1 shows sources for readily available patient education materials.

Limitations in the current review and in the avail-
TABLE 1. Sources for Patient Education Materials


Contains computerized handouts on more than 1100 topics written by more than 20 health care professionals, allows handouts to be individually printed, is updated yearly, and includes Spanish versions of the top 250 topics. Requires 4 megabytes of RAM, cost, $495 for a single user. Network packages also available.


Contains several hundred 1 to 2-page informational handouts. Cost, $42.95. Updates provided in almost every issue of *Contemporary Pediatrics*.


Informational handouts on developmental promotion come on tear-off pads arranged into 11 age groups and four areas: self-care and socialization, speech, fine motor, and gross motor

Carolyn Shroeder, Betty Gordon, *Assessment and Treatment of Childhood Problems* (Guilford Press, 72 Spring St, New York, NY 10012, phone: 1-800-365-7006)

Written for professionals, addresses how to help parents and children with stressful life events such as new siblings, sibling rivalry, divorce, and death. Also addresses management of common problems such as toilet training, sleep, sexual abuse, negative behavior, fears, habits and tics, etc. Appendices include a list of books for parents and children, tools for gathering information from parents and teachers, and descriptions of numerous common assessment devices. Cost, $45

Wyckoff and Unell, *Discipline Without Shouting or Spanking* (Simon & Schuster, 1230 Ave of the Americas, New York, NY 10020, phone: 800-223-2336)

Simple, inexpensive text is written at the 4th to 5th-grade level and includes short 2- to 5-page chapters on behavioral problems. Cost, $6. Gives not only guidance, but very helpful examples.


Contains numerous informational handouts and other suggestions for organizing general practices to address developmental and behavioral issues. Cost, $46.75. Includes the Eyberg Child Behavior Inventory, the Connor’s Scale, and others


Tools to help parents and teachers make quick, accurate decisions about how to counsel parents on children’s behavior or offer developmental promotion suggestions. Also gives information on when to make referrals, administer screening tests, provide vigilant observation versus reassurance. Cost, $38.99

American Academy of Child and Adolescent Psychiatry (url: (http://www.cmhcm.com/factfam.htm)

Handouts that can be downloaded without cost. Written in English, Spanish, and French, and address such topics as divorce, disaster recovery, and how to choose a psychiatrist

American Academy of Pediatrics (fax: 1-847-228-5097)

Parenting brochures, available in large quantities. Cover violence, television, single-parenting, toilet training, hospital stays, health and safety issues, etc. The AAP website (URL: http://www.aap.org/family/patents/huide.htm) also describes child-care books, videos, hand-held health records, waiting room magazines, etc.

Ambulatory Pediatric Association (URL: http://www.ambped.org/ParentHandouts/APAHandoutsTOC.html)

Website houses several downloadable handouts. Focus on building language and preschool skills, socialization; other handouts address the most common nonmedical complaints such as discipline and behavior

British Columbia Council for the Family (fax: 1-847-228-5097)

Provides individual and bulk sales of books and brochures on such topics as adolescence, marriage, family cohesion, child development, etc. Organization also has a parenting program, “Nobody’s Perfect,” with training manuals, and an online service, “Parents’ Resource Almanac” (URL: http://family.starwave.com/resource/prf/c_1_1.htm#183). Includes an excellent list of books, periodicals, associations, and research centers devoted to parenting.

Entire books on behavioral and developmental issues available to parents

In addition to *Discipline without Shouting and Spanking* (listed above), other helpful books are *Toddler Taming: The Guide to Your Child From One to Four*, Christopher Green, Sydney, Australia: Doubleday, 1990. 15–25 Helles Ave, Moorebank, New South Wales 2170


Helpful sources for age-paced newsletters *Pierce the Pelican*, (Family Publications Center, 1539 Jackson Ave, Suite 210, New Orleans, LA, phone: 504-523-0555). One of the best researched and most widely used (eg, it is sent to every child born in Louisiana). Usually initiated during the newborn period, there are 12 letters in the first year and bimonthly letters thereafter until age 6. Bulk purchases (sets of 100), $88; $96 for version with your office imprint, Specimen, $8. Prenatal version available *Growing Child*. (Dunn & Hargitt, Inc, Box 620, Lafayette, IN 47902, phone: 1-800-927-7289) Monthly child-rearing newsletter, matched at time of subscription to age of child (birth through 6 years). Cost, $15 for the first year, $20 each year thereafter *Your Child Now*, phone: 1- 800-777-0987, 4-page supplement bound with regular issues of *Child* magazine. Subscribers submit child’s date of birth and magazine includes inserts geared to the specific age. Supplements address development, appropriate toys, etc. Annual subscription of 10 issues to both *Child* and the supplements, $12.97

Additional research is needed on the use of patient education techniques in conjunction with assessment tools that assist with selection among methods and content.

Also worthy of evaluation is the extent to which incorporating a family-focused, family systems approach enables the practitioner to better assess family structure and function and establish a more effective therapeutic alliance with parents.

Studies are also needed to assess the extent to which acknowledging and incorporating cultural beliefs and practices when working with ethnic minority
families enhances satisfaction with care and the acceptance of traditional preventive interventions.14

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The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/101/6/e10