
Developing Health Education Materials for Inner-City Low Literacy Parents

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Their proposal was tied for third place in the 1993 Secretary's Award for Innovations in Health Promotion and Disease Prevention competition. It has been edited and revised for publication. The contest is sponsored by the Department of Health and Human Services and administered by the Health Resources and Services Administration of the Public Health Service in cooperation with the Federation of Associations of Schools of the Health Professions. The entry was submitted by the UCLA School of Public Health, Deborah C. Glik, ScD, faculty advisor.

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Synopsis.....

The question of identifying and treating childhood illness confronts all new parents. Misconcep-

tions often lead parents to manage illnesses in their young children inappropriately through overly aggressive treatment or insufficient attention. This responsibility is especially challenging for low-income new parents who lack the literacy levels needed to understand and use much of the existing health education literature and who are without access to health facilities and providers.

In response to a perceived need for health information directed at low-income, low-literacy parents, students from the University of California at Los Angeles School of Public Health created an easy-to-use reference booklet called "A Parent's Guide: When Your Child Is Sick." The booklet's aim is to assist parents in treating common childhood illness and identifying more serious diseases requiring medical attention.

A comprehensive and manageable amount of information is provided in the booklet. Behaviors and issues covered include (a) recognition of symptoms, (b) actions that could be taken in the home, (c) medicines that could be administered, and (d) recommendations on how persistent problems might be handled.

PARENTS FREQUENTLY LAMENT that children do not come equipped with "how to" manuals. The question of identifying and treating childhood illness confronts all new parents, resulting in trial and error experiments. Misconceptions often lead parents to manage illnesses in their young children inappropriately through overly aggressive treatment or insufficient attention (1).

Finding answers to the numerous questions new parents have is especially challenging for those of low income or who are recent immigrants, or both. They often lack the functional literacy levels needed to understand and use much of the existing health education literature, are without social support networks, and lack access to health facilities and providers.

A substantial population of parents in downtown Los Angeles fit this profile. Researchers

at the University of California at Los Angeles (UCLA) School of Public Health conducted a study in 1992 of more than 200 mothers in a Los Angeles County Special Supplemental Food Program for Women, Infants, and Children (WIC). According to this study, inner-city mothers desire greater information on how to maintain their children's health and treat illnesses like fever, colds, or other common complaints.

In a 1987-88 survey of 390 low-income families in downtown Los Angeles, both homeless and housed, 70 percent of the children were reported to have symptoms of cough or cold in the month prior to the survey. Thirty-eight percent had fever, 29 percent had episodes of vomiting or diarrhea, 13 percent had ear infections, and 19 percent reported having had sore throat with fever (2). Families interviewed for this study

reported concern about the health of their children at a rate four times higher than that reported for the general population. Alperstein and colleagues reported that children of low economic status families experience a greater number of medical problems than children of higher socioeconomic status families (3).

In a 1991 study of preventable hospitalization and hospital use, Valdez and Dallek reported that the rates of preventable medical admissions in Los Angeles County for respiratory infections were 28 percent higher than the rest of the State of California, 19 percent higher for childhood ear infections, and 12 percent higher for pediatric gastroenteritis (4). They declared that members of low-income minority communities are admitted to hospitals for conditions "treatable with a reasonable level of outpatient care" and recommend improved access to primary and preventive care.

Specific childhood illnesses and related symptoms can have serious consequences for children. The misuse of anti-pyretics for fever, aspirin in particular, has potentially devastating repercussions (1). Studies demonstrate that child health booklets with guidelines for parents can effectively promote appropriate self-care behaviors (5). Roberts and colleagues conducted a study to determine if self-care instructions combined with a health education program could reduce unnecessary visits to physicians for minor respiratory illness (6). They reported that the instruction and education offered a viable means of reducing health care expenditures.

There is obviously a substantial need to inform this population better, particularly given the context of the numerous challenges to their health and well-being.

Literature Summary

Students at the UCLA School of Public Health investigated both professional literature targeting low-literacy parents and lay literature guides on how parents can respond to a child's illness. A review of the existing sources of health information for parents reveals that such information is frequently inaccessible.

Health books often contain complicated syntax and flow charts for decision making that are difficult for adults with low education levels to follow. Furthermore, these books are expensive to produce and purchase. Other inadequate forms of communication include lengthy publications with fine print and vague instructions.

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The literature review identified a need for health information that is specifically designed for low-income, low-literacy parents (7-9). It also showed that the distribution of a simple, informative, and durable reference guide written at a low literacy level is an appropriate and innovative method to aid parents in their health care decision-makings.

Furthermore, the health literature shows that inappropriate use of the emergency room for nonemergency visits poses a serious problem (10,11). The lack of primary health care and sufficient information for parents, especially low-literate inner-city parents, may contribute to use of the emergency room for treatment of common childhood illnesses that could be sufficiently treated and managed in the home. The dilemma of overburdened emergency rooms is a well-documented national problem and is particularly important in Los Angeles County (12). According to a recent study in Los Angeles, families presenting to a hospital emergency room with urgent health conditions receive delayed care that leads to health and economic consequences (13).

Methodology

The foundation of an appropriate health communication strategy or intervention ultimately rests on the theoretical models used in the planning and design stages. Communication and health education theories relevant to this project include McGuire's communication for persuasion model, Green's PRECEDE model, and Roger's diffusion of innovations (14-16). According to the behavioral models of Rogers and McGuire, the communication intervention must be perceived as credible, useful, and adoptable to be effective, while Green's theories raise the issues of predisposing, enabling, and reinforcing factors that must be considered to ensure achievement of objectives. McGuire notes that positive appeals can have long-term beneficial results in message retention and compliance (14).

Low income families constitute the primary target for this health communication strategy. Key informant interviews with shelter directors,

parenting class instructors, and program directors were conducted during the needs assessment phase. Women in parenting classes and children enrolled in an after-school program at a Los Angeles shelter participated in a series of focus group sessions to identify health concerns. Children enumerated a spectrum of traditional health interventions invoked by their parents in response to childhood illness.

After consultation with health professionals, a health promotion strategy was developed for parents that addressed symptoms of, and possible treatments for children's respiratory illnesses, fever, and diarrheal disease and criteria for emergency room utilization. The strategy revolved around the production of a booklet, "Parents' Guide: When Your Child is Sick."

The guide's content, form, graphics, and color were developed according to accepted principles of communications design. Research had indicated that specific instructions, rather than fact sheets, are preferred by audiences (17). Because indexes, tables of contents, and cross-references may be confusing to low literacy parents, each topic page was designed to be both discrete and comprehensive. The 18-page booklet is bound with an inexpensive ring.

Appropriate page colors were selected for each topic on the advice of a regional health communications designer (for example, pink for fever, blue for coughs). Graphic symbols that emphasized selected messages, without diverting the attention of the reader, were devised for each topic (for example, a medical bag with a cross highlights treatment instructions). Type size and upper and lower-case lettering differentiated headings from text and promoted readability.

The SMOG readability formula was used to assess the minimum literacy level necessary to adequately comprehend the booklet. The material is readable at the sixth grade level. Further, the polysyllabic words used are familiar to many families and are not expected to detract significantly from its readability (9).

Project Objectives

The primary goal of the communications project is to improve parenting and home care treatment skills for common health problems in low-income families. There are several specific objectives.

1. Increase the number of parents who are able to recognize, identify, and distinguish symptoms

of children's common illnesses from signs that warrant medical attention.

2. Provide a readily available health reference booklet to facilitate appropriate understanding and home management of childhood illness.

3. Reduce reliance on unnecessary pharmaceuticals or potentially harmful traditional home remedies.

4. Decrease inappropriate usage of emergency room facilities.

Significance

Basic parenting skills and actions parents can take when their children are sick are often overlooked by educators. This oversight contributes to inappropriate use of emergency room facilities, particularly by inner city parents. Therefore, this health promotion project is significant in that it provides a low-cost and effective communication tool that can contribute to a solution.

The material provides parents with the information to recognize symptoms of health problems in children and to identify the appropriate courses of action. Some common conditions of childhood have potentially severe consequences (for example, ear infections may result in permanent hearing loss). Therefore, it is critical that parents have the means to identify key symptoms. Furthermore, the booklet lists simple home interventions or remedies useful for the sick child. Parents' knowledge of safe home remedies and treatments, coupled with an awareness of the pharmaceuticals or methods that are unnecessary or dangerous, facilitates improved decision making. The booklet gives parents some directions about when to use health facilities and health professionals.

The booklet's succinct and simple instructions, using reproducible, interesting materials maximizes its utility. Its durability and attractiveness encourages the parent to keep it as a household reference. Although this tool cannot solve the structural problems that cause inappropriate use of emergency rooms, such as insufficient primary health care services, nor address all childhood illnesses and symptoms that may arise, this book empowers parents with the knowledge they need for appropriate health care decision-making.

Ways In Which Project Is Innovative

The booklet is innovative for several reasons, particularly in form and content. It is a health education tool that is pertinent, adaptable, and appropriate in a variety of settings. Providing

easily understandable information is essential in improving parenting skills and children's health, in reducing inappropriate use of medical services, and in facilitating parents' ability to make complex and accurate decisions.

"A Parents' Guide: When Your Child Is Sick" addresses the important issue of self-care and assists parents in identifying and diagnosing what illness a child may have, whether it is amenable to home treatment or is more serious, and how the parent should proceed with attending the child. Although the content is limited to fever, coughs, ear aches and ear infections, diarrhea, and diaper rash, additional topics and health issues can be added easily at nominal cost.

This booklet can be distributed in a variety of settings and through a variety of channels. It can supplement existing parenting courses, such as those provided by WIC, or it can be given in individual counseling sessions by emergency room or health clinic staff members.

Summary of Evaluation Methods

The final product was reviewed for content and structure by a pediatric nurse and a nurse practitioner working with low-income families. Time limitations prevented an initial evaluation in local missions or parenting programs; instead, the materials were pretested in a WIC clinic after review and approval of the booklet by the director of educational communications for WIC clinics.

WIC participants reviewed the materials and were asked a series of questions regarding comprehensibility, utility, and originality of the booklet. Most mothers approved of the format and agreed with the content. Mothers stated that they would place the booklet in a kitchen drawer or in their child's bedroom for easy reference, and would refer to this booklet if their child became ill. The mothers interviewed suggested that the booklet be produced with Spanish instructions on the flip side of the pages and that information on allergies be added.

Although outcome measures are difficult to ascertain for a health reference guide, some process, outcome, and impact evaluation is possible. The volume of reference guides distributed would serve as a basic process evaluation. A survey of participants several months after distribution of the booklets would assess the potential productivity of the reference guide (for example, did parents store or dispose of the booklet and do the parents remember what topics are addressed in the booklet?).

Recipients should be asked if they had referred to it, and if the instructions in the booklet had been followed. Clinic facilities distributing the booklet could compare utilization patterns of the emergency facility by recipients of the booklet with nonrecipients. Because the format of the reference guide facilitates additions or revisions, results from evaluation of the guide may be easily implemented. Adjustments for communities with specific needs, such as information on substance abuse, may also be made when necessary, in accordance with evaluation results.

Budget Estimate and Justification

The reference guide was printed on half-size, heavy, colored paper bound with an inexpensive ring to form a durable booklet. Because health information brochures typically printed on normal size, thin paper are frequently discarded by recipients, this reference guide was designed to be attractive, valuable, and inexpensive.

Cost per booklet would vary depending upon the number produced, specific colors selected, and volume of the order. Production cost is approximately \$1.60 per booklet for an order of 100 booklets, or \$1.32 per booklet for an order of 500 guides. Purchasing a larger stock of reference guides with subsequent distribution among regional parenting classes and programs would significantly reduce the item cost.

Given the cost burden of emergency facilities treating nonemergency illnesses of children, and the opportunity costs of parents who ineffectively treat their children's illnesses, the minimal costs of the reference guide appear justifiable. Preventing even one case of Reyes' Syndrome by withholding aspirin from a vulnerable febrile child could justify the provision of several thousand reference guides. Written materials serve to underscore the significance of messages provided to parents by health educators, and this reference guide would be a continuous resource to parents with minimal access to appropriate health facilities or health-related advice.

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