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CHILDREN'S ASTHMA: RELATIONSHIP BETWEEN PARENTAL
EDUCATION AND FREQUENCY OF EMERGENCY
ROOM VISITS

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by
Victorine Natalie Brewer-Benjamin
June 2006

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Approved by:


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ABSTRACT

Asthma is a chronic inflammatory lung disease characterized by recurrent episodes of breathlessness, wheezing, and coughing. The study examined the relationship between parental education about asthma and the frequency of emergency department visits. The research was conducted at an acute care hospital in Southern California using a sample of thirty-two parents. Data was collected using a self-administered survey questionnaire employing quantitative research design and chi-square test.

Although parents found education beneficial in controlling their child's asthma, there was no significant relationship between education and frequency of hospitalization and emergency room visits. There was a significant relationship between asthma severity and hospitalization. Implications for social work practice are that, the results can guide social workers toward providing better services, referrals, appropriate interventions, and counseling to their patients.

ACKNOWLEDGMENTS

While this has been a long and arduous journey it hasn't been without its rewards. To those who have supported me, encouraged me and picked me up when I was down I can't thank you enough. It's your words of kindness, love and sincerity that have brought me thus far. To you I say I love you and appreciate you.

To all my friends in the program, I want to thank you for all your words of encouragement and unwavering support. I know you all will do great things.

DEDICATION

To my husband (Gary), my son (Gary Jr.) and my daughter (Vonice), I want to thank for their patience, understanding, and support throughout this journey. Your faith and belief in me gave me the strength I needed to succeed.

To my mom (Jean E. Smith) who has always been a source of inspiration to me words cannot express how much you mean to me. You are without a doubt the strongest most giving person I know.

I LOVE YOU ALL

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CHAPTER ONE

INTRODUCTION

Morbidity and mortality from asthma have increased over the past decade despite improved understanding and significant advances in medical therapeutics. Among the identified contributing factors is poor compliance with prescribed medical regimens. Consequently, considerable attention has been paid to the issue and the role of health care providers in fostering improved adherence. Several programs were designed to help families learn how to become active partners with their physicians in managing the disease and fostering improved compliance (Howell, Flaim, & Lung, 1992).

Problem Statement

Asthma is a chronic inflammatory lung disease characterized by recurrent episodes of breathlessness, wheezing, coughing, and chest tightness, termed exacerbations. The severity of exacerbations can range from mild to life threatening. Exacerbations can be triggered by exposures and conditions such as respiratory infections, house dust mites, cockroaches, animal dander, mold, pollen, cold air, exercise, stress, tobacco smoke

and indoor and outdoor air pollutants. Both the frequency and severity of asthma symptoms can be reduced by using medications and reducing exposure to environmental triggers (DHHS, 2000).

Asthma is a major public health problem in the United States. The disease affects approximately 15 million people, nearly 5 million of whom are under the age of 18. People with asthma experience well over 100 million days of restricted activity annually and the total annual costs of the disease are estimated at \$11.3 billion. Although asthma mortality in the United States is among the lowest in the world, approximately 5,000 asthma related deaths still occur each year in this country (DHHS, data).

Epidemiological data indicate that 7.4% of school age children report having asthma symptoms annually and 2.8 million children between five and 14 years of age have a diagnosis of asthma (CDC, 1998). School absenteeism is two to three times higher for children with asthma than for their healthy peers (Hanson, Lapidus, Zuniga, & Murphy, 2000).

Office and emergency department (ED) visits and hospitalizations for asthma are increasing substantially,

even though patient education could prevent most episodes of poorly controlled asthma (AAAAI, 1999; CDC, 2002).

Childhood asthma is associated with substantial morbidity and mortality. Although the management of this disease has improved considerably over the past decade, rates of morbidity indicators such as hospitalization and emergency department visits are on the rise. An increase in these morbidity indices has a considerable impact on the economic cost associated with the illness. In 1994, the United States spent an estimated \$10.7 billion on asthma (Weiss, Sullivan, & Lyttle, 2000).

The National Asthma Education and Prevention Program (NAEPP) Expert Panel, organized by the National Institutes of Health's National Heart, Lung, and Blood Institute, published its first set of asthma guidelines in 1991 (covering diagnosis, monitoring and the prevention of disease progression) and a subsequent set in 1997 (updating recommendations for the treatment of asthma and discusses areas of controversy, including combination therapy and the use of antibiotics for asthma exacerbations).

Social workers can advocate for the treatment and management of asthma as part the medical

interdisciplinary team. Social work interventions should include ongoing support, referrals, and counseling for asthmatic children and their parents. They can also offer financial assistance to those in need to help defray the cost of prescriptions and hospital visits. Social work practitioners can intervene effectively when life stressors and impaired coping create problems such as depression, anxiety, impeded work performance, or diminished social functioning.

Purpose of the Study

The purpose of this study is to examine the relationship between parental education on asthma and the frequency of emergency department visits with their child for asthma incidences. The focus of this study will be on health and educational services for people with asthma.

The number of people with asthma has more than doubled to almost fifteen million from 1980 to 1996 with children under the age of five having the highest rate of increase. The rates for children under five have increased over 160 percent between 1980 and 1994. A chronic disease of childhood, asthma has affected an estimated 4.4 million children. Asthma is more prevalent

in school age children than pre-school children and is slightly higher in boys than in girls under the age of eighteen (DHHS, 2000).

Asthma affects people of all ages, races, and ethnic groups, although low-income and minority populations experience substantially higher rates of mortality, morbidity, hospital admissions and emergency room visits. Research data shows that African Americans were more likely than whites to have asthma, die from asthma and present to the emergency room more often. Compared to Whites, African Americans were more likely to seek care from an emergency room.

Many healthcare professionals and people with asthma are not implementing the NIH Guidelines for managing asthma. Research has shown that patient education and medication management reduces emergency services and improves quality of life.

Various outstanding programs supported by federal and private funds have helped foster needed changes in medical practice and patient behavior but these need to be evaluated in a greater variety of settings and implemented on a larger scale in order to have national impact.

Populations and neighborhoods experiencing the greatest burden of disease often lack access to high quality medical care, including adequate education about asthma management and sufficient medications and equipment. Poor housing and environmental conditions make it difficult to control exposures that worsen asthma. In addition, lack of asthma surveillance at the state and local levels hampers public health efforts to direct quality health care toward the most severely affected populations (DHHS, 1997).

This study will utilize quantitative research in the form of a questionnaire. The purpose of using quantitative data is to elicit quantifiable information in order to see if there is a relationship between parents that are given education on asthma and the frequency of emergency room department visits for their child with asthma.

Significance of the Project for Social Work

Social workers can play an important role in supporting parents and children. By providing a listening ear and reassurance, they can boost parental confidence in their handling of the disease, a confidence that is

often shaken and even overcome by guilt and doubt. They may also serve as advocates in the medical system and assist parents in navigating between its complex organizational barriers (Parker, 2005).

It is important for social workers to know the type of services that are available to parents that have children with asthma in order to provide them with better services, offer appropriate interventions, counseling and referrals. When social workers are aware of the needs of clients, it fosters a better relationship and builds trust. Social workers can work toward meeting those needs in a timely, efficient, practical manner and planning future interventions by including all parties involved. This type of knowledge is not exclusive to medical social workers but to all areas of the social work field. Social workers that work with foster care and child and welfare services can also benefit from this study.

When placing children in foster families, group homes and other state run facilities, it is important to know the child's medical history. By enhancing the knowledge base of social workers regarding all areas of a child's illness, they can be more careful in assuring that the proper medication follows the child wherever

he/she goes. They can then pass on the necessary plan of action to potential childcare providers when placing a child with asthma with a new family.

There are often times when a child is removed from a home quickly and without their belongings. This type of oversight can be detrimental to a child with chronic asthma especially if the social worker is not aware of the symptoms and triggers or even aware of the child's illness.

Part of the role of the social worker is to provide a safe and nurturing environment and to make sure the child's needs are being met. If they are not aware of a child's special needs then their job is not being done effectively and can cause potential harm down the road.

Although each phase of the generalist intervention process is important, this study will be focusing on the second phase (assessment) of the process in order to properly assess each individual family for their particular needs and services. For the purpose of this paper, assessment is the investigating and determination of variables affecting an identified problem (asthma) viewed from the micro perspective. During the assessment phase, relevant information will be collected about the

problem so that decisions can be made about what to do to solve the problem. The research question is: Is there a relationship between education of family with prevention of asthma attacks and frequency of emergency department visits of their child for asthma?

Asthma Morbidity and Mortality

Despite effective therapies, asthma prevalence, morbidity, and mortality among children is increasing in the United States, and the burden is being borne disproportionately by Blacks and Hispanics. The steady rise in the prevalence of asthma constitutes an epidemic, and by all indications is continuing. Even if rates were to stabilize, asthma would continue to be a profound public health problem. It is a potentially fatal, chronic disease responsible over 1.8 million emergency room visits per year, over 460 thousand hospitalizations per year, and over five thousand deaths per year. Although the burden of asthma affects Americans of all ages, races and ethnic groups, recent data indicate that children, low-income and minority populations have been most severely affected (DHHS, 2000).

Numerous studies, especially in the United States, have consistently shown that the increases in the rates of hospitalization and/or emergency department (ED) visits are not similar across the socioeconomic groups. Africa-American children and those with lower socioeconomic status (SES) are more often hospitalized

and make greater use of emergency department services in relation to asthma (Amre & Infante-Rivard, 2002).

Socioeconomic Status/Hospitalization

Previous community and cohort research has convincingly shown that Black and Hispanic children, when compared with white children, exhibit more poorly controlled chronic asthma and more frequent emergency room use and hospitalizations and receive suboptimal pharmacotherapy and preventive care.

Many researchers have hypothesized that socioeconomic status is indirectly responsible for the often-found racial/ethnic discrepancies in chronic asthma severity, management, and health care utilization. The socioeconomic status hypothesis asserts that race-based asthma discrepancies are not attributable to race or ethnicity, *per se*, but to status socioeconomic, which is simply a trenchant confounder of race/ethnicity.

The evidence for this hypothesis is mixed. Only a few studies have shown that socioeconomic status differences account for most or all of the race/ethnicity-based differences in asthma. On the basis of these studies, the socioeconomic hypothesis seems

inadequate to explain fully the racial/ethnic difference in asthma among children (Boudreaux et al., 2003).

Policies/Guidelines

The 106th Congress recognized childhood asthma as a national health problem requiring multidimensional policy actions within and among the social welfare and health systems that influence children's lives. The asthma-related provisions of the Children's Health Act of 2000 amended the Public Health Services Act to expand and strengthen national asthma services, prevention activities, and compilation of data, and called for the National Heart Lung Education Prevention Program to submit recommendations to Congress on coordination of Federal asthma activities (National Heart lung and Blood Institute, National Asthma Education and Prevention Program, Federal Liaison Group on Asthma, 2001).

Although the Children's Health Act of 2000 is an important first step toward national asthma policy, appropriate funding and implementation of this act is critical for its impact. The imperative to develop national asthma policy responses, such as this act, is strong. Reducing asthma would not only improve the

quality of life for children and their families, and it would also be likely to produce cost savings among health insurers and patients with severe disease (Sullivan & Weiss, 2001).

The "Expert Panel Report: Guidelines for the Diagnosis and Management of Asthma", released a second set of Guidelines: Guidelines for the Diagnosis and Management of Asthma which outlined four disease management strategies (measures of assessment and monitoring, control of factors contributing to asthma severity, pharmacological therapy, and education for a partnership in asthma care) that would keep asthma under control and improve quality of life.

Education and Disease Management

A review of the literature found that improvements in asthma management point to the need for ongoing asthma education to address the learning needs of the children and families. Asthma education can reduce asthma related morbidity and acute care needs, and has been particularly successful in patients with the highest asthma related morbidity (Gibson, Boulet, & Robichaud, 2001).

Researchers agree that asthma education should be of high

quality and should include both teaching based on physician-determined action plans and motivation to attend regular medical follow-ups. In addition to reducing asthma-related morbidity and improving quality of life, such interventions may improve medical care, as patients are instructed on how to better assess asthma control and use medications, thus potentially improving physician/patient communication.

Much of the research indicated that emergency department visits for asthma may reflect poor asthma control, often due to insufficient education and medical follow-up.

Theories Guiding Conceptualization

To date, few asthma programs have examined children's evaluations of health maintenance in their homes. Instead, past studies primarily have focused on asthma education programs within hospital settings, at or near the time of discharge (Madge, McColl, & Paton, 1997; Bernard-Bonnin, Stachenko, Bonin, Charette, & Rousseau, 1995; Wilson, Mitchell, & Rollnick, 1993). Thus, little is known about the needs of children with asthma in a home health setting (Lincoln, 1993).

Another gap in the literature is the lack of attention to the potential impact of interactions between family caregivers and formal home health caregivers (i.e., paid professionals) on asthma management. Most research on asthma has been focused on the patient within the context of the medical model of illness. From this starting point, others have expanded on what was once the traditional focus of medical treatment, the patient's physiologic response, to include the patient's psychosocial response to illness. Review of the literature also revealed an evidenced based approach to determine several key issues regarding appropriate medical therapy for patients with asthma.

This study will utilize the disease management model of care. Disease management has been derived from the model of population-based care for patients with specific chronic conditions. Population-based care attempts to restructure the delivery of services to improve patient outcomes. It emphasizes the implementation of evidence-based health promotion, disease prevention, proactive treatment, and follow-up objectives (Katon et al., 1997).

Disease management programs go further by restructuring primary care for specific high-risk patient populations with chronic conditions. The goal is to decrease the prevalence of the condition, reduce the number and duration of disease episodes, provide targeted treatment, and promote patient self management. Health Management Organization's now urge providers to establish disease management programs for high-risk, high-cost patients to achieve these outcomes. Patients are grouped by population, for example, individuals diagnosed with diabetes, asthma, depression, heart diseases, cancer, and stroke and Medicare recipients who have multiple chronic conditions. Individuals whose diseases are not controlled are at risk of immediate health problems, using more inpatient and emergency room services, and developing comorbidities (Hunter & Fairfield, 1997; Keehn, Roglitz, & Bowden, 1994).

Disease management also has evolved from the evidence-based medical outcomes approach that attempts to determine what constitutes adequate care, measured by real health and quality-of-life improvements for individuals. Evidence-based disease management models require practitioners to identify not only physical

risks, but also psychological and social risks affecting medical, cost, and quality-of-life outcomes.

Health-related quality-of-life outcomes became a central concept as developed countries shifted their emphasis from curing diseases to minimizing effects of diseases on activities of daily life. The goals for patients became the attainment of more effective lives, the preservation of physical functioning, and the attainment of well-being. Reduced quality of life is correlated with various physical illnesses (Anderson, Kiecolt-Glaser, & Glaser, 1994). It has also been identified as a predictor of clinical depression (Gonzales, Lewinsohn, & Clarke, 1985) and chronic pain syndrome (Dworkin et al., 1992)

Summary

Asthma is a chronic disease that affects people of all ages, races, ethnicities and cultures. It is an epidemic that is increasing steadily over the years. With proper healthcare management, education, follow-up and treatment regimen asthma can become more manageable and cost effective. By following the guidelines set forth by

the NAEPP, physicians, healthcare workers, parents and children can achieve better control over the disease.

CHAPTER THREE

METHODS

Introduction

The focus of this chapter was on the analysis of data collected from participants that were provided with a questionnaire regarding the relationship between education of family with children who have asthma and the use of emergency department visits. This chapter maps the course from establishing a research question to gathering data to writing the research findings.

Study Design

The purpose of this study was to examine the current use of the emergency department in relation to previous asthma education provided to families who have children with asthma. The focus of this study was on available services to parents that have children with asthma and their uses of morbidity services such as hospitals, emergency rooms, follow up and educational services.

The study used a quantitative design in the form of a questionnaire, (Appendix A.) to examine the benefits of education versus no education. One of the limitations of the study may include parents having to recall events

over the past year. Given this approach, the information cannot be validated. Also, such information could be inaccurate. Another limitation is it is not known if the children that used the emergency room for asthma exacerbation were able to get an appointment when needed or referred by their physicians.

The research question for this study is: Is there a relationship between education of family with prevention of asthma attacks and frequency of emergency department visits of their child for asthma?

Sampling

The data was collected directly from participants (N = 32) from January 9, 2006 through April 30, 2006, which consisted of parents of children with asthma that present to the pediatric out patient clinic for treatment. All participants were of non-specific/discriminant gender, age, and ethnic/racial background. All participants were parents of asthma patients in an acute care hospital ambulatory pediatric out patient clinic. Parents will be 18 years of age or older.

Data Collection and Instruments

Information regarding the frequency of services used, perceived benefits of educational services, frequency of hospitalization and education received about asthma was collected by information submitted on a questionnaire (Appendix A).

The study consists of sixteen variables which were measured at the nominal, ratio or ordinal level. The first three variables (i.e., age, gender, race/ethnicity) are independent variables with age being a ratio measurement, gender and race/ethnicity being nominal measurements. Questions one and five were fill in the blank questions. The fifteenth variable (a check all that applies) identifies services used in the past and uses a nominal level of measurement.

The sixteenth variable is a dependent variable and employs a 4-point Likert scale to collect ordinal data assessing benefits of educational services. The sixth and ninth variables are dependent variables that require a yes or no answer using an ordinal measurement. The fourth and fourteenth variables require a check one that applies to assess relationship to child and asthma severity. The seventh, eight, tenth, eleventh, twelfth, and thirteenth

variables required a check on that applies to access hospitalization and emergency room visits.

This instrument was created to illicit specific information that was important to the focus of the study. It was created by constant review of the literature and using some of the literature as a guide to create the questionnaire. The instrument is straight forward and not ambiguous. It is written clearly, is unbiased and is easily understood.

One limitation of this study is that it is limited to patients visiting the pediatric ambulatory care clinic at one acute care hospital, located in southern California. Another limitation may be a limited sample in regard to size, place, type of problem and demographics.

Procedures

The researcher provided the questionnaires with an instructional cover sheet to the clinic person at the desk who greets each pediatric clinic appointment. Each person was given a questionnaire when they check in for their appointment. Attached to the questionnaires were self sealing addressed envelopes for the participants to secure their completed questionnaires. A box for

collection was located at the nurses' station in the back.

The participants were instructed to place the completed questionnaire in the envelope and return it to the box located at the nurses' station in the back of the clinic once they finished answering all the questions..

The questionnaire (Appendix A) given to the participant also included an instructional sheet (Appendix B) and a debriefing statement (Appendix C). The estimated time of completion for each participant to fill out the questionnaire was approximately five minutes.

Protection of Human Subjects

Participants were informed that their participation in the "Is there a relationship between education of family with prevention of asthma attacks and frequency of emergency department visits of their child for asthma" study is voluntary, confidential and anonymous.

Participants were made aware that no identifying information (i.e., name, address, phone number) would be taken from them at anytime during their participation in the study. Participants were also made aware that they

could withdraw from the study at anytime without any repercussion.

Data Analysis

Data analysis utilized descriptive univariate, statistics to describe data consisting of measures of central tendency and frequency distribution. Chi Square and Correlational Analyses will be performed to statistically evaluate the results of the survey. Correlation was applicable to data at the interval and ratio levels of measurement. Correlation investigated the strength of the relationship between two variables. Univariate analysis utilized nominal and ordinal levels of measurement.

Summary

In this chapter, the study's design, the sampling methods, the data collection process, the procedures, the protection of human subjects, and data analysis were presented and discussed in detail. An overview of the research methods used in the study of the use and availability of asthma services were discussed.

CHAPTER FOUR

RESULTS

Introduction

This chapter presents the data obtained from the participants. The findings are shown with univariate statistics and tables.

Presentation of the Findings

Demographic Characteristics of the Children

Table 1 illustrates the demographic characteristics of the children. The sample consists of a total of 32 children. Nineteen children (59.4%) were males and thirteen (40.6%) of the children were females. The age range of the children in the sample was 1 to 15 years and the mean age of the children is 6.2 years. Approximately 56.3% of the children were between the ages of 1 to 5, and both age groups of 6 to 10 and 11 to 15 had an equal distribution of 21.9%.

In regards to ethnic distribution of the children, nearly 38% were identified as Caucasians. Blacks were represented by 28.1% of the children and Hispanics represented 34.4% of the children. Assessing the

respondents' relationship to the child, 87.1% were the child's mother and 12.9% were the child's father.

Table 1. Demographic Characteristics of the Children

Variable	Frequency N	Percentage (%)
✓ Gender (N = 32) Mean = 6.2 yrs		
Female	13	(40.6)
Male	19	(59.4)
✓ Age (N = 32)		
1-5	18	(56.3)
6-10	7	(21.9)
11-15	7	(21.9)
✓ Ethnicity		
Black	9	(28.1)
Caucasian	12	(37.5)
Hispanic	11	(34.4)

Hospitalization/Emergency Department Visits

Table 2 Shows children's asthma conditions and receipt of asthma education. In assessing when the child was first diagnosed with asthma, thirteen parents (49.9%) stated that their child was diagnosed with asthma between ages 6-8 years old. Approximately eight parents (25.8%) said their child was diagnosed with asthma when they were less than a year old. Between the ages of 2-5, approximately 20.0% of the children diagnosed with the disease were between the ages of 2-5 years old, while 13.1% was diagnosed between the ages of 9-15 years old.

Twenty four parents (75.0%) acknowledged receiving education about asthma at the time of their child's diagnosis while eight parents (25.0%) denied receiving any education on the disease.

Table 2. Hospitalization/Emergency Department Visits

Variable	Frequency N	Percentage (%)
Age at first diagnosis (N = 31)		
0-1	8	(25.8)
2-5	6	(19.4)
6-8	13	(49.9)
9-15	4	(13.1)
Received asthma education (N = 32)		
Yes	24	(75.0)
No	8	(25.0)
Times hospitalized (N = 30)		
None	16	(53.3)
1 or 2 times	9	(30.0)
3 or 4 times	5	(16.7)
Times in Emergency Department (N = 30)		
None	10	(33.3)
1 or 2 times	12	(40.0)
3 or 4 times	2	(6.7)
5 or 6 times	1	(3.3)
7 or more times	5	(16.7)
Asthma rating (N = 32)		
Mild	8	(25.0)
Moderate	15	(46.9)
Severe	9	(28.1)

Since receiving education on asthma, more than half (53.3%) of the children in the survey had not been

hospitalized due to an asthma attack. Since receiving education on asthma, 30.0% of the children had been hospitalized one to two times while another 16.7% had been hospitalized three or four times. Of those receiving education on asthma, 33.3% of the parents' children had not been to the emergency department due to an asthma attack. Close to half of the parents (40.0%) had visited the emergency department one or two times, 6.7% had been to the emergency department three or four times and another 3.3% had visited the emergency department for asthma care. About 17% of the children had been to the emergency department seven or more times for asthma related systems. Many of the parents (46.9%) considered their child's asthma to be moderate. Another 25.0% of the parents considered their child's asthma to be mild and 28.1% considered it severe.

Effects of Education on Asthma

Table 3 examines the rate of hospitalization and emergency department visits after receiving education and educational materials. An overwhelming majority of parents (87.1%) had received education and/or educational materials on caring for a child with asthma. A small percentage 12.9 did not receive any education and/or

educational materials. More than half (60.7%) did not have a child that was hospitalized for asthma. Nine parents (32.1%) had a child hospitalized one or two times while two parents (7.1%) had a child that was hospitalized three or four times. In regards to emergency department visits, fourteen parents (48.3%) had not gone to the emergency department, ten parents (31.3%) had gone one or two times , one parent (3.4%) visited three or four times, another parent (3.4%) visited five or six times and three parents had visited an overwhelming seven times or more.

Table 3. Effects of Education on Asthma

Variable	Frequency n	Percentage (%)
Received education/materials (N = 31)		
Yes	27	(87.1)
No	4	(12.9)
Hospitalized for asthma (N = 28)		
None	17	(60.7)
1 or 2 times	9	(32.1)
3 or 4 times	2	(7.1)
Emergency department visits (N = 32)		
None	14	(48.3)
1 or 2 times	10	(31.3)
3 or 4 times	1	(3.4)
5 or 6 times	1	(3.4)
7 or more times	3	(10.3)
Usefulness of education (N = 32)		
Not helpful	4	(12.5)
Moderately Helpful	15	(46.9)
Helpful	9	(28.1)
Very Helpful	4	(12.5)

The majority of parents (46.9%) found asthma education and/or educational materials moderately helpful while another (28.1%) found it helpful and an equal number of parents found it not helpful and very helpful (12.5% & 12.5%) respectively.

Lifetime Prevalence

Table 4 shows the amount of time a child has been hospitalized or visited the emergency department in his or her lifetime and the morbidity devices used. The

majority of parents (56.3%) reported that their child had never been hospitalized in his or her lifetime due to asthma, followed closely by 34.4% of parents who admitted that their child had been hospitalized one or two times on their lifetime due to asthma. A small number of parents (6.3%) had to have their child hospitalized three or four times in their lifetime due to asthma. Children that have been hospitalized five or six times represented the smallest amount (3.1%) of the sample.

A third of the parents (34.4%) denied having to take their child to the emergency department in their lifetime due to an asthma attack. More than one third of the parents (40.6%) had taken their child to the emergency department one or two times in their lifetime due to asthma compared to 6.3% who had visited the emergency department three or four times. Very few parents (3.1%) had taken their child to the emergency department five or six times in their lifetime due to asthma while a good amount of parents (15.6%) had taken their child to the emergency department seven times or more in their lifetime since being diagnosed with asthma.

Table 4. Lifetime Prevalence

Variable	Frequency n	Percentage (%)
Frequency of Hospitalization/lifetime (N = 32)		
None	18	(56.3)
1 or 2 times	11	(34.4)
3 or 4 times	2	(6.3)
5 or 6 times	1	(3.1)
Frequency of Emergency Department Visits/lifetime (N = 32)		
None	11	(34.4)
1 or 2 times	13	(40.6)
3 or 4 times	2	(6.3)
5 or 6 times	1	(3.1)
7 or more times	5	(15.6)

An overwhelming amount of parents (65.6%) had used the services provided by the emergency room for asthma care for their child.

A chi-square test was conducted to compare the means of the amount of times a child was hospitalized to the severity of the disease. Results has shown that severity and frequency of lifetime hospitalization was significant at ($X = 12.463$, $df = 6$, $p < .052$).

Summary

Whether or not a parent received education did not seem to have a bearing on the child's frequency of hospitalization or emergency department visits. The

severity of the child's disease seemed to be a factor in their rate of hospitalization.

CHAPTER FIVE

DISCUSSION

Introduction

This chapter discusses the findings of the study by examining the results and explaining the effects of education on hospitalization and emergency room visits. It also discusses the parent's perception of the usefulness of education and the implications for social work practice.

Discussion

Demographics

This study gathered data from parents that have children diagnosed with asthma. The age of the children ranged from less than a year to fifteen years old. There were thirteen females and nineteen males from various ethnic backgrounds that were presented in this research. There was an equal distribution of different ethnic backgrounds. All of the children were patients of an acute care hospital ambulatory pediatric outpatient clinic.

Education and Hospitalization

The findings of the study have shown that those that received education and/or educational materials on asthma were just as likely to be hospitalized or visit the emergency department as those that didn't receive any education. The majority of parents found that the education they received was very useful in helping them care for their child with asthma.

It appears in this study, education does not have a bearing on hospitalization or emergency department visits. However, the difference in use and nonuse of the hospital and /or emergency department is negligible. Utilization of the hospital and emergency department for asthma is a useful indicator of the potential morbidity associated with the disease. This may point to the fact that there is a need for ongoing asthma education to address the learning needs of the children and families. Personal and familial factors (socioeconomic and marital status) may influence the asthma management behaviors by the child and their parent ha may subsequently affect health outcomes.

Good asthma management at home contributes to control of asthma symptoms leading to improved health

outcomes. When asthma symptoms are kept under control, unplanned trips to the hospital or emergency room can be reduced or even eliminated.

Asthma Severity and Education

The findings of the study have shown that the severity of the disease has had an impact on lifetime hospitalization due to an asthma attack. Although most parents did not have their children hospitalized or go to the emergency department, those that did visit those morbidity devices did so repeatedly. It is not known if these children represented the more severe cases of asthma. Findings showed there was a significant correlation to lifetime hospitalization and asthma severity. Hospitalization is an important outcome in asthma because it often reflects the presence of severe, uncontrolled disease.

Many parents found asthma education to be useful but to what extent is not known. Even with asthma education many parents found themselves going to the emergency department or having their child hospitalized. The repeated use of the emergency department shows that the child's asthma is not under control and that the parents need to be more informed. Poor self-management may be a

key factor in the high morbidity of patients with asthma. Parental education as well as self-management on part of the child is essential to proper asthma care. Children of school age can be taught to recognize asthma symptoms, use asthma devices and alert parents when an attack is coming on. Patients may fail to avoid environmental factors that make asthma worse, recognize early warning signs of worsening asthma, take appropriate medication, or get prompt medical help when problems occur.

Limitations

The findings of this study should be viewed in light of several limitations. First, the degree of parental education is not known and was not assessed. It is not known how long ago education was received and if it was adequately presented to the parents (i.e. verbal, written, video, books, pamphlets). Second, the sample size was limited and specific to one pediatric clinic in an acute care hospital. Third, the small sample limited the degree to which a more thorough examination of the facts could be analyzed. More research is needed with a larger sample and a wider selection of participants.

The study does not allow for exploration of factors that can influence hospitalization for asthma, such as extent of asthma control, management practices, access to care, health beliefs, and environmental factors.

Recommendations for Social Work Practice, Policy and Research

Social workers can play an important role in helping parents manage their child's asthma by referring families to community resources, provide financial assistance and advocate within the medical system. They can also help families identify coping strategies, develop asthma action plans and sign up for asthma education classes to learn how to manage asthma symptoms. Older children can learn how to self manage their asthma and learn what their asthma triggers are.

Social workers can help parents join support groups which can help them reduce stress, feel less alone and confused. With this population the focus would be on assessing high risk patients and their families and providing brief counseling and emotional support. As part of interdisciplinary teams, social workers can advocate for their patients with the medical team and help with the psychosocial assessment of the disease.

Social work's person in environment approach make our profession especially well suited for providing direct services to families, designing outreach strategies, and advocating policy development in areas such as environmental protection, hazardous waste disposal, sanitation, housing regulations and other preventive measures that contribute to the control of the disease. These activities ensure that the act of breathing is a life sustaining and not a life-threatening act as it has become for some children.

Social workers and other health care professional must also work together to advocate for universal health coverage that guarantees all families access to appropriate medical and psychosocial care, including preventive services, case management and the most effective medication and other remedies.

Conclusions

This research was conducted as a study to see if education would make a difference in the use of the emergency department and in hospitalization. All participants were members of the same acute care

hospital. The study showed no significant correlation between education and hospitalization.

More attention needs to be paid to the long term effects of education, emergency department visits and hospitalization. Changes need to be made in the way information is given to the parent and some assurance that the information is being understood. Parents need to be made aware of changes in medication use, environmental and household triggers.

APPENDIX A
QUESTIONNAIRE

QUESTIONNAIRE

1. Age (of child)

2. Gender (of child)
 Male
 Female
3. Race/Ethnicity
 Black
 Caucasian
 Hispanic
 Asian
 Other
4. Are you the child's.....choose one of the following?
 Mother
 Father
 Aunt
 Grandmother
 Grandfather
 Foster parent
 Legal guardian
5. When was your child first diagnosed with asthma? _____
6. Did you receive any asthma education at the time? If no, go directly to question #9, below
 Yes
 No
7. Since that time, about how many times has your child been hospitalized for asthma?
None _____ 3 or 4 times _____ 7 or more times _____
1 or 2 times _____ 5 or 6 times _____
8. Since that time, about how many times has your child had to go to the Emergency Department due to an asthma attack?
None _____ 3 or 4 times _____ 7 or more times _____
1 or 2 times _____ 5 or 6 times _____
9. Have you ever received education and/or educational materials about caring for a child with asthma and/or preventing asthma attacks?
Yes _____ No _____

If No, go directly to question #12, below, and answer questions #12 and #13.

If Yes, please answer the rest of the questions below:

10. Since that time, how many times has your child been hospitalized for asthma?
None _____ 3 or 4 times _____ 7 or more times _____
1 or 2 times _____ 5 or 6 times _____

11. Since that time, about how many times has your child had to go to the Emergency Department due to an asthma attack?
None _____ 3 or 4 times _____ 7 or more times _____
1 or 2 times _____ 5 or 6 times _____

12. To the best of your knowledge, how many times has your child been hospitalized in his or her lifetime due to asthma?
None _____ 3 or 4 times _____ 7 or more times _____
1 or 2 times _____ 5 or 6 times _____

13. To the best of your knowledge, about how many times has your child had to go to the Emergency Department due to an asthma attack in his or her lifetime?
None _____ 3 or 4 times _____ 7 or more times _____
1 or 2 times _____ 5 or 6 times _____

14. Is your child's asthma considered....? (Please check one box).
 mild
 moderate
 severe

15. Which of the following services has your child used in the past? (check all that apply).
 Emergency room
 Hospitalization
 Follow-up services
 Routine physician Visit
 None

16. Please indicate on the scale from 1-4 how helpful the asthma education was for you in helping your child with asthma.

Not Helpful	Moderately Helpful	Helpful	Very Helpful
1	2	3	4

Note: Thank you for completing the study.

APPENDIX B
INSTRUCTION SHEET

Instruction Sheet

HELP US LEARN MORE ABOUT ASTHMA

**PLEASE FILL OUT & ANSWER THE QUESTIONS ON OUR
QUESTIONNAIRE**

Your participation in completing this questionnaire is important to help us learn more about childhood asthma and medical services. The study is voluntary, confidential and anonymous. No identifying information (i.e., name, address, phone number) will be taken from you at anytime during your participation in the study.

“You do not have to complete this survey questionnaire to receive medical care for your child. If you start to fill out the survey and decide you don’t want to finish it, simply tear it up and throw it away. If you do finish answering the questions, please place it in the envelope, seal it and put it in the box located at the nurses station in the back where you go when called in to see the doctor. No one will know your identity or the identity of your child because the questionnaire is completely anonymous.”

The nurses and receptionist will not be able to answer any of your questions pertaining to the questionnaire. Answer the questions the best you can.

Thank you for your participation.

APPENDIX C
DEBRIEFING STATEMENT

Debriefing Statement

Thank you for completing the study. You have participated in a research study conducted by Victorine Natalie Brewer-Benjamin, graduate student of social work at California State University, San Bernardino. The purpose of this study was to examine the relationship between parental education about asthma and the frequency of emergency department visits. The Department of Social Work Sub-Committee of the Institutional Review Board at California State University, San Bernardino and the Institutional Review Board of Riverside County Regional Medical Center approved the study.

If you are interested in the results of the study, a copy of the results will be available in the Pfau Library of California State University San Bernardino and at Riverside County Regional Medical Center after September 30, 2006.

If you have any concerns following involvement in his study please contact Dr. Janet Chang, at (909) 537-5184.

Thank you for your participation in the study.

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