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***Effectiveness of Community Efforts to Reduce Unmet Health
Needs Among Rural School Children***

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ABSTRACT

Unmet health needs among children are a major problem. The purpose of the study is to determine the effectiveness of community efforts to reduce unmet health needs over a five-year period, controlling for health insurance coverage status and age in a rural school-aged population. Data was collected through school-based non-invasive health screenings for 7665 observations for 2813 student participants made throughout a five-year period. The health insurance coverage revealed an 11% uninsured rate. Uninsured and publicly insured children were significantly more likely to have an unmet dental need with elementary students experiencing the greatest amount of unmet dental need. Unmet vision need was significantly greater among publicly insured children with junior high students more likely to experience the need. Privately insured children were significantly less likely to experience an unmet auditory need. It is clear that health insurance plays a significant role in having a child's overall health needs met. It is imperative that every effort be made to ensure children's access to health care and enrollment in insurance programs.

Key Words: *rural children, unmet health needs, health insurance coverage*

Effectiveness of Community Efforts to Reduce Unmet Health Needs Among Rural School Children

Introduction

The United States has one of the most prosperous and technologically advanced health care systems in the world, spending more per capita on health care than any other country, yet a glaring concern for such a prosperous nation is the prevalence of unmet health needs evident in the nation's youth.¹ Unmet health needs are related to the availability and usage of children's health insurance coverage.²

Diverse groups of children have experienced a wide range of unmet health needs. Unmet health needs among children are identified as a major problem and can have a profound and lifelong impact on health status and quality of life. While research in the area is limited, existing studies have supported the significance of this problem. In the United States during the last decade, 7.3% (4.7 million) of children experienced having at least one unmet health need, with dental care being the most prevalent.³⁻⁵ Uninsured adolescents were four times as likely to have an unmet health need when

compared to their insured counterparts. Uninsured children were more likely to go without dental care and medical-surgical care.² They were also three times as likely to go without needed eyeglasses and prescription drugs as compared to insured children.^{5,6}

Among children, dental care was ranked the number one unmet need, followed by prescription drugs, vision care, medical care, and mental health care, respectively.^{3,4,7,8} Peterson, Niesson, and Lopez⁹ investigated dental morbidity and found that different types occurred at different ages. The most prevalent problems identified were caries, gingival disease, malocclusion, loose teeth, and trauma. Research by McCormick, Kass, and Elixhauser et al.¹⁰ found that less than half of all children had a dental care visit and no subset of the children's group even reached 60% with at least one visit. Among ethnic groups, African American (27.2%) and Hispanic American (49.2%) were least likely to receive dental care.

Unmet health needs can be attributed to disparities found between insured

and uninsured children's access to different types of health care, such as medical-surgical care, dental care, prescription drugs, eyeglasses, and mental health care. Carter, et al.¹¹ found that insured rural children utilized medical and dental services more frequently than the uninsured.

Children's unmet health needs have become of increasing concern to school personnel, medical professionals, the general public, and a growing number of public agencies. The purpose of the current study is to determine the effectiveness of community efforts to reduce the most commonly unmet health needs and whether differences exist based on health insurance coverage, age, and project year, as identified in an overall health assessment in a rural, school-aged population. The primary research questions are: (1) What are the trends in health insurance status among rural school children between project years one through five? (2) What are the trends in unmet health needs of K-12 rural children? (3) Is there a difference among insured and uninsured K-12 rural children's unmet health needs? (4) Is there a difference among age groups in rural children's unmet health needs?

And, (5) Do unmet health needs decrease over time after controlling for insurance status (public, private and uninsured) and age category?

The opportunity to conduct this study was afforded by a partnership between Blue Cross and Blue Shield (BCBS) of Alabama, a rural community, and the local school system, a partnership whose purpose was to demonstrate the feasibility of school-based efforts in the rural South to identify and enroll uninsured children into existing insurance programs.¹² BCBS provided a grant to evaluate this Child Caring Initiative over a five-year period. Initiated in West Alabama's Bibb County, it is the first program known to Blue Cross Blue Shield of Alabama to place insurance program policy in the hands of local community members.

One of the primary research questions in the current study was to examine differences in children's unmet health needs based on health care coverage. The assumption that children who have less access to health services have increased unmet health needs than children with improved access was based on Aday and Anderson's behavioral model of health care access.¹³ Aday and Anderson suggest that people

are predisposed to use health services based on their sociodemographic characteristics, such as age, race, and values regarding health. Health service use is then facilitated by (1) enabling factors, such as health insurance and having a regular source of care; (2) need-based factors, such as illness level; and (3) health-system factors, such as access to actual services and providers. Aday and Anderson's framework has been supported in the literature as an effective model for predicting health service utilization.[5,13,14](#)

The Child Caring Initiative is structured as a community-based participatory research model. This model is based on the premise that the community is an active participant in the research process, from the design stage to the evaluation and implications stage of research. Community-based participatory research (CBPR) has been given considerable attention in recent years as a meaningful approach in research with vulnerable populations. The core belief of CBPR is that both problems and solutions lie within the community and that any mode of effective change must actively involve the community for any long-term sustainability to occur. The result is

research that relies heavily on the community to develop programs and policies that are acceptable to the community. In accordance with this dynamic, the following research is the result of a collaborative university-community partnership, with primary direction coming from the community.[15-17](#)

Methods

Design and Sample. The Child Caring Initiative study is based on a longitudinal analysis of rural children's school-based head-to-toe physical assessment and health screening made during school health fairs. Analyses are based on annual observations over a five-year period (1996-2000). The University of Alabama Institutional Review Board (IRB) and the county's board of education provided approval for the study conducted by the community formed organization.

The rural county where this study was conducted has moderate resources and is in close proximity to an urban center, not unlike many rural areas throughout the Southeast. There were no special characteristics of the county or its population to lead one to conclude that children in the county were not

representative of rural children from throughout the Southeastern United States.^{18,19} A single public school system seemed a realistic option for capturing a representative sample of the target population. All children grades K-12, who were enrolled in the school system in a central geographic area were afforded the opportunity to participate in the school health fairs; hence, population sampling methods were not employed in the current study. Physical assessments were performed annually at on-site health fairs for each of the four schools that are within the single school system: elementary (K-3), middle (4-6), junior high (7-8), and senior high (9-12).

Measures. The survey instrument employed in the Child Caring Initiative (CCI) consisted of a consent form, parent questionnaire and health evaluation form. The parent questionnaire requested information about family demographics, child health insurance status, health utilization and health behaviors. The health evaluation form included spaces for health professionals to record vision, hearing, and scoliosis screening results, a dental examination, a brief head-to-toe physical examination, and blood hemoglobin.

Procedures. The Child Caring Initiative provided a series of incentives for both students and teachers to encourage full participation in health fairs. All students who returned the consent form and parent questionnaire, regardless of permission status, were entered into prize drawings. Teachers obtaining an 80% return rate were given a \$25.00 gift certificate for school supplies; those having a greater than 90% return rate were additionally entered into a drawing for a \$100.00 gift certificate, one per school.

The health fairs were conducted by community volunteers and by university nursing students and faculty. The school gymnasiums were organized into a series of health stations.(Table 1). Students had the option of not participating in any aspect of the health fair with which they were not comfortable. Following receipt of the parent questionnaire, an attempt was made to follow up any questionnaire indicating that a child had no insurance coverage source available. Outreach was conducted to enroll families in available sources of health care coverage, such as Medicaid, State Child Health Insurance, or the BCBS Child Caring Foundation. Additionally, referrals for follow-up care

or further evaluation were provided to the parents for any questionable finding identified through the school-based health screenings. For children with conditions requiring immediate attention, parents were notified by a

telephone call on the day of the health screening. All other referrals were made by sending a form to parents indicating the questionable findings on the day of the health fair.

Table 1
Health Fair Stations

Station 1: Check-In. Students registered with the health fair. Each student was verified as having permission to participate. Once verified, they were given their health assessment form and sent to the next available station.

Station 2: Interview. Students were asked a series of questions regarding demography, health behaviors and utilization.

Station 3: Vital Signs. Student vital sign weight, height, blood pressure, heart rate, and respiratory rate- were assessed and recorded.

Station 4: Vision Test. Student vision assessed using Snellen Letters and Picture Tests. Referral forms were given to students with 20/40 or above in either eye.

Station 5: Hearing Test. Student hearing was assessed using an audiometer. Referral forms were given to students requiring 30 db or greater to detect sound.

Station 6: Physical Examination. Student physical health-general appearance, head, eyes, ears, nose, mouth/throat, heart, lungs, and scoliosis screen was assessed.

Station 7: Anemia Test. Student blood was analyzed using a hemoglobin or hematocrit test for students having permission. Students with hemoglobin values below 12%, or hematocrit values below 30% were given a referral for follow-up evaluation.

Station 8: Check-Out. Students checked-out of the health fair. Forms were verified as complete and students were given a balloon, school pin, and/or soda depending on age.

Variables. Unmet health needs are measured using composite scores for dental, visual, and auditory health and in relation to referrals/types of referrals.

The dental score is a composite of abnormally missing teeth, unfilled cavities, discoloration, and assessment of the mouth. The vision score is a

composite of vision scores using a Snellen eye chart and abnormalities of the eye. The auditory score is a composite of hearing test scores and abnormalities of the ear. Each of the variables used in composite scoring were measured dichotomously as either 0 (no unmet need) or 1 (unmet need). The composite score for dental health, visual health, and auditory health were each analyzed dichotomously as either the presence or absence of an unmet need. Referrals were scored as either 0 (no referral) or 1 (referral made). Analysis was controlled for by children's type of health insurance coverage, age group, and project year. Type of health insurance coverage was categorized as uninsured, publicly insured, or privately insured. Age group was categorized by school grade level: elementary (K-3); middle (4-6); junior high (7-8); and high school (9-12). The project years included in the analyses were 1996 through 2000. Each of these dependent variables, i.e. dental unmet need, visual unmet need, auditory unmet need, dental referral, vision referral, auditory referral, primary care referral and any referral, was a categorically repeated measure across five years. Type of health insurance coverage, data collection year,

and age group were all time-varying explanatory variables. Generalized estimating equations (GEE) were used to test differences across type of coverage, age group, and changes over time with a SAS PROC Gen Mod procedure, SAS version 9.0. with an α of .05.

Results

Study Participants. The repeated-measures research design in the current study was achieved by linking student participants from previous years with current years using a unique identification number for each participant. Other linked data included race, gender, date of birth, and parent/guardian name. The resulting sample size for the current analyses were based on 7,665 matched observations for 2,813 student participants. Among participants, 51% were female, and 45% were non-white. Less than 1% of minority participants were of a racial background other than African American. Approximately 73% of participants lived in homes earning less than \$32,000 annually. The head of household education level was high school or above in 87% of the study population. Compared to non-

participants (students of the schools as a whole), there were no significant differences in percent female, percent non-white, or other characteristics of socio-economic status.

Across the five-year study period, approximately 79% of enrolled students participated in the school-based health fairs. Participation was higher among younger students, ranging from 85% to 91% in grades K-3, 83% to 90% in grades 4-6, and 54% to 69% in grades 7-12. Participation rates include only

students with full participation in the school-based health assessments. Students who were absent, withdrawn or moved, in alternative school, or those without parental consent are not included in the rate of participation, nor were students who declined to participate. Consequently, the overall response rate weighed in slightly higher at 93% of enrolled students. Table 2 describes the participation rate by school site and project year.

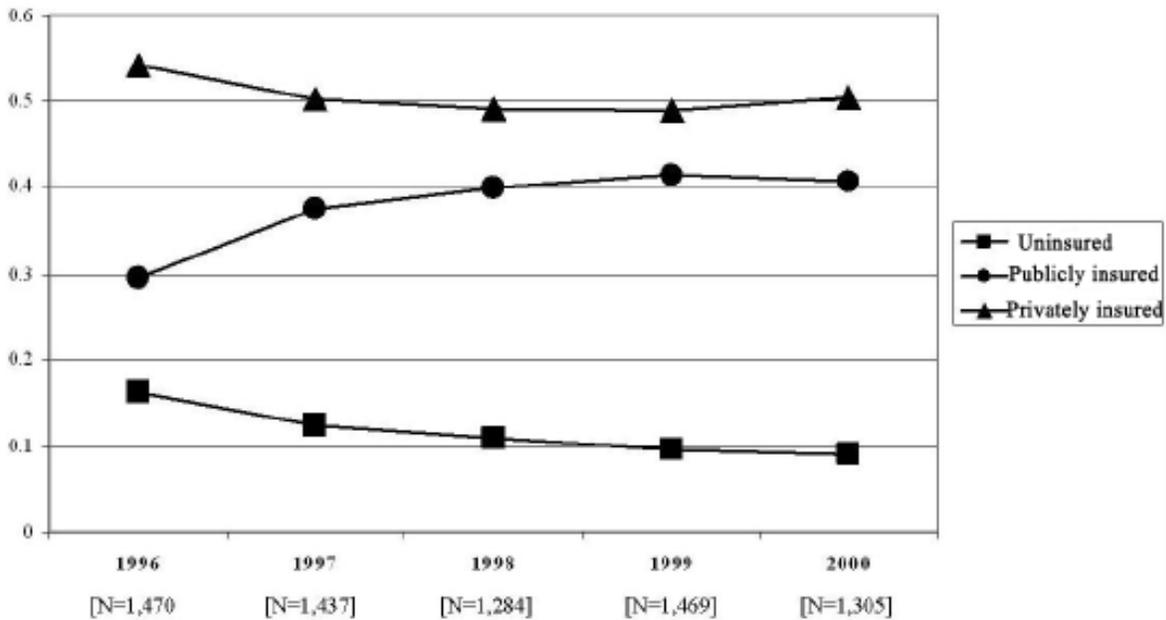
Table 2
Participation Rates by School Site and Project Year

| Year | | Elementary (K-3) | Middle (4-6) | Junior & Senior High (7-12) | Average Participation Rate by Year |
|--|----------------------|---------------------|-----------------|--------------------------------------|--|
| 1 | School Participation | 548 | 385 | 632 | |
| | School Attendance | 641 | 445 | 1,007 | |
| | Participation Rate | 85% | 87% | 63% | 78% |
| 2 | School Participation | 553 | 393 | 683 | |
| | School Attendance | 623 | 438 | 983 | |
| | Participation Rate | 89% | 90% | 69% | 83% |
| 3 | School Participation | 553 | 366 | 585 | |
| | School Attendance | 607 | 452 | 941 | |
| | Participation Rate | 91% | 81% | 62% | 78% |
| 4 | School Participation | 543 | 409 | 604 | |
| | School Attendance | 602 | 467 | 937 | |
| | Participation Rate | 90% | 88% | 64% | 81% |
| 5 | School Participation | 529 | 369 | 478 | |
| | School Attendance | 600 | 445 | 886 | |
| | Participation Rate | 88% | 83% | 54% | 75% |
| Average Overall Participation by School | | 89% | 86% | 65% | |

Trends in health insurance status among the participants over the five year timeframe revealed an 11% uninsured rate, decreasing from 16.19% in 1996 to 9.12% in 2000. Significant differences in coverage status were identified in 1996 to 1997 and 1997 to 1998, with a stabilizing effect beginning in 1998 through 2000. Figure 1 depicts the

health insurance coverage status among participants across the five-year study period. Similar to national trends, public health insurance coverage increased, while private coverage decreased. While the uninsured rate decreased annually in 1996 through 1998, there was not a net reduction of uninsured in 1999 and 2000.

Figure 1.
Trends in Health Insurance Coverage 1996-2000



Unmet Needs Health Composite Results according to Health Insurance Status and Age. Type of health insurance coverage, age group, and project year were statistically significant

factors in composite scores for dental, vision, and auditory unmet needs ($p < .01$) (Table 3). The results for each health composite category are described below.

Table 3
Health Composite Results (as proportion of children experiencing the health condition) by Health Insurance Coverage, Age Group and Project Year

| | Dental | Vision | Auditory | Dental Referral | Vision Referral | Auditory Referral | Primary Care Referral | Referrals |
|--------------------|--------|--------|----------|-----------------|-----------------|-------------------|-----------------------|-----------|
| Uninsured Publicly | 0.36 | 0.17 | 0.30 | 0.20 | 0.13 | 0.14 | 0.18 | 0.49 |
| Insured Privately | 0.36 | 0.21 | 0.28 | 0.20 | 0.17 | 0.15 | 0.17 | 0.53 |
| Insured Elementary | 0.29 | 0.17 | 0.25 | 0.14 | 0.13 | 0.13 | 0.12 | 0.41 |
| Middle School | 0.43 | 0.16 | 0.31 | 0.21 | 0.11 | 0.12 | 0.19 | NA |
| Junior High | 0.39 | 0.19 | 0.20 | 0.21 | 0.17 | 0.10 | 0.16 | NA |
| High School | 0.32 | 0.20 | 0.30 | 0.18 | 0.17 | 0.14 | 0.13 | NA |
| 1996 | 0.20 | 0.17 | 0.31 | 0.12 | 0.13 | 0.20 | 0.15 | NA |
| 1997 | 0.48 | 0.18 | 0.23 | 0.36 | 0.16 | 0.19 | 0.06 | 0.59 |
| 1998 | 0.33 | 0.18 | 0.41 | 0.15 | 0.10 | 0.16 | 0.19 | 0.47 |
| 1999 | 0.38 | 0.24 | 0.37 | 0.06 | 0.15 | 0.12 | 0.15 | 0.39 |
| 2000 | 0.32 | 0.16 | 0.20 | 0.19 | 0.17 | 0.08 | 0.24 | 0.49 |
| | 0.17 | 0.14 | 0.18 | 0.15 | 0.14 | 0.15 | 0.14 | 0.45 |

Unmet dental need. After adjusting for age group and year, uninsured ($p = .000$) and publicly ($p < .0001$) insured children were significantly more likely to have unmet dental need than their privately insured counterparts. There was no significant difference in composite scores between uninsured and publicly insured children. Elementary students experienced the greatest amount of unmet dental need, decreasing as children got older. The

difference in unmet dental need was largest between elementary and high school students ($OR = 3.36$, $p < .0001$). Participants in 1998 were significantly ($p < .0001$) more likely than those in 1997 to have unmet dental need. Otherwise, unmet dental needs generally declined over time.

Unmet vision need. Unmet vision need was significantly ($p < .0001$) greater among publicly insured than for uninsured or privately insured,

adjusting for age and year. Contrary to expectation, a need for vision care did not differ significantly between uninsured children and privately insured children. Elementary students had significantly ($p=0.019$) less vision care need than middle or junior high school students. Unmet vision need did not differ significantly between elementary and high school students, or between middle and junior high school students. However, junior high students were significantly ($p=0.018$) more likely to experience unmet vision need than elementary or senior high students. After adjusting for age group and coverage status, participants in 1998 experienced significantly greater ($p<.0001$) unmet vision need than participants in other years. Otherwise, unmet vision need largely decreased with time, with year 2000 participants experiencing the least need.

Unmet auditory need. Privately insured children were significantly ($p=.012$) less likely to experience unmet auditory need than were publicly insured or uninsured children. There was no significant difference between publicly insured or uninsured children's auditory need, nor between elementary, junior, or high school students. By

comparison, middle school students had significantly ($p<.0001$) less unmet auditory need than elementary, junior, or senior high school students. Unmet auditory need differed significantly ($p<.0001$) year-to-year, except for 1999 to 2000. While unmet auditory health need generally declined over time, there was significantly ($p<.0001$) less auditory health need in 1996, compared with observations in 1997 and 1998.

Referral Results. Referrals were analyzed in terms of whether a child received a referral and by type of referral, categorized as dental, vision, auditory, or primary health care referral (Table 3). Results for referral categories are described below.

Referral. Whether a child received a referral was significantly influenced by the type of health insurance coverage ($p<.0001$) and the program year ($p<.0001$). Age group was not a significant correlate of presence/absence of a referral. Uninsured and publicly insured children were significantly ($p<.0001$) more likely to receive a referral than privately insured children. Receipt of referral did not differ significantly between uninsured and publicly insured children. Participants in 1996 were significantly

($p < .0001$) more likely than those in subsequent years to receive a referral. Participants in 1997 did not differ from those in 1999 or 2000, nor did 1999 participants differ from those in 2000 in the presence/absence of a referral.

Dental referrals. Compared with privately insured children, uninsured and publicly insured children were significantly ($p = .0002$ /uninsured; $p < .0001$ /publicly) more likely to receive a dental referral. There was no significant difference between uninsured and publicly insured children. The likelihood of receiving a referral for dental care was generally higher among elementary students, decreasing as students got older ($p < .0001$). Dental referrals decreased significantly ($p < .0001$) from 1996 to 1998, with an upward trend in 1999 and 2000. While significant, ($p < .0001$) this increase remained lower than that in 1996. Participants in 1996 were nearly nine times more likely to receive a referral for dental care than in 1998.

Vision referrals. Publicly insured children were more likely to receive a referral for vision care than were uninsured ($p < .0001$) or privately insured children ($p < .0001$). Vision care referrals did not differ significantly among

uninsured and privately insured children. Middle and junior high students were significantly ($p < .0001$) more likely than high school students to receive a referral for vision care. In contrast, elementary students were significantly ($p = .0107$) less likely to receive a referral for vision care than students in all other age groups. Receipt of a vision referral was significantly ($p = .0007$) less among 1997 participants, compared with participants from all other years. Participants in 1996 were significantly ($p < .0001$) more likely to receive a vision referral than those in 1997. However, vision referrals among participants in 1996 were not significantly different from those in 1998, 1999, or 2000. Additionally, there were no significant differences between participants from 1998, 1999, and 2000.

Auditory referrals. Publicly insured children were significantly more likely than both uninsured and privately insured children to receive a referral for auditory care ($p = .014$). Generally, the likelihood of receiving a referral for auditory care increased as students got older, with students in older age groups significantly ($p < .0001$) more likely to receive a referral over students in younger age groups. Compared to

participants in other years, participants in 1996 had a greater likelihood ($p=.0007$) of receiving a referral for auditory care. Participants in 1999 were significantly ($p<.0001$) less likely to receive a referral for auditory care than participants in other years.

Primary care referrals. Uninsured and publicly insured children had a greater likelihood of receiving a referral compared with privately insured children ($p<.0001$). Elementary students had significantly ($p=.002$) more primary care referrals compared with students in middle, junior high, and senior high age group categories. Middle school students were more likely than junior high students to receive a primary care referral ($p=.046$). Otherwise, there were no significant differences among the remaining age group categories. Participants in 1996 were far less likely to receive a primary care referral compared with participants in other years ($p<.0001$). Conversely, participants in 1999 had a significantly ($p<.0001$) greater likelihood of receiving a referral for primary care compared with participants in other years.

Discussion

Uninsured rates among school

children participants were at their highest in 1996, declining gradually through 1998, and then stabilizing in remaining years at approximately 9% to 10%. Similarly, the results indicate that these rural Alabama children's health insurance coverage status, as well as type of health insurance coverage, across the five-year study period paralleled children's health insurance coverage trends nationally. Alabama's SCHIP (ALL Kids) program was implemented in the months following the 1998 health fairs, therefore, coverage status within this program was not evident until the 1999 data collection. Over the five-year study period, public health insurance coverage increased from 29.6% to 40.5% among school children. At the same time private health insurance coverage decreased from 54.2% in 1996 to 48.9% in 1999, then rose slightly in 2000 to 50.3%. Cunningham and Park²⁰ analyzed data from the 1996-1997 and 1998-1999 Community Tracking Study Household Surveys (CTS). Their study indicated that nationally, privately sponsored health insurance coverage among low-income children decreased from 47% to 42%, while reliance on publicly funded health insurance coverage increased from 34% to 39%.

Low-income children's uninsured rate did not change significantly over the time period. Rather, declines in private health insurance coverage programs, primarily employer-sponsored, were offset by increasing coverage in public health programs.²⁰

A high percentage of Bibb County families, especially families with children, live in financially challenging conditions that have a direct impact on children's health. According to the U.S. Census Bureau,²¹ 14.9% of Bibb County families lived in poverty in 1999. Among families with children, the poverty rate increased to 24.4% of families with children below age 18, and 28.6% of families with children below age 5. Per capita income in Bibb County for 2000, according to the U.S. Census of Population and Housing,²² was \$14,105, and, according to Alabama Kids Count,¹⁵ median family income was \$37,230 in 2000. The Appalachian Regional Commission²³ ranks Bibb County as a distressed county based on low per capita income, and on high rates of poverty and unemployment. Sixty percent of students enrolled in the participating schools participated in the federal Free or Reduced Lunch Program.

Unmet health needs, specifically dental and vision, are prevalent in K-12 rural children. Dental needs are identified as the number one unmet health need with cavities being the most significant problem. This finding is supported in the literature with cavities being recognized as one of the most chronic infectious diseases among children.²⁴ The CDC has found that 58% of all children by the age of 8 will experience tooth decay; this proportion will increase to 78% during adolescence.²⁴ Each year, approximately 51 million school hours are lost due to absenteeism resulting from dental-related illness.²⁵ The Alabama Rural Health Association has declared the state of Alabama in dental care crisis.²⁶ Uninsured and publicly insured children lack the access to dental care that privately insured children have attained. This is primarily due to insurance status, lack of dentists accepting public insurance, and the decrease in the numbers of dentists in rural counties. Subsequent to this study, the Alabama Medicaid Agency implemented a multidimensional outreach effort, *Smile Alabama*, targeting both providers and recipients. Early results of *Smile Alabama* suggest that their efforts are

working as indicated by both an increase in the number of Medicaid dental providers and service utilization.²⁷ These promising results suggest that Alabama may be able to decrease the dental care disparities among its children.

Unmet vision needs are found to be more prevalent in publicly insured children than uninsured or privately insured. Uninsured and publicly insured children received more referrals for vision care than privately insured children. This would support previous research that uninsured children are three times as likely to go without needed eyeglasses and vision care as compared to insured children.⁶

Referrals are made to parents/guardians of children for follow up care for conditions detected during health care screenings. The school nurse plays a very important role in the referral process. Referrals are made through telephone contact for more urgent findings, and otherwise by sending a referral form to parents/guardians noting problems detected. Contact information is provided to parents to obtain additional information, if needed, regarding other health fair findings pertaining to their child. Support is

offered to families, such as discussion of the child's health condition with the child's physician upon request, helping enroll the child in available health insurance sources for which the child is eligible, and other requests as needed. The school nurse also assumes responsibility for follow up with parents/guardians on significant conditions to ensure that needed care is obtained. While every effort is made to provide information and support to parents regarding the health condition, it is noted (as a limitation) that it is the parent/guardian responsibility to follow through on securing the needed care and treatment for the child. The school nurse, in collaboration with the school system, can impact rural school children's lives by developing interventions such as health promotion programs related to nutrition and exercise.

Several other limitations were identified. The convenience sample targeted students enrolled in the public school system. Statistical research sampling techniques were not employed in the research design. Some biases may have existed between those children who participated and those who did not. It is presumed that non-participants

represent a higher risk category of children, many of whom failed to return a permission form, were absent or in alternative school for disciplinary problems, or had moved or dropped out of school. Therefore, the observations of the unmet health needs were assumed to be underestimated.

Health insurance coverage status was based on parental self report at a specific time and therefore, status could change between time of parent survey and actual onsite assessment. Type of insurance coverage was identified but specific details related to coverage benefits were not collected. Finally, the data collected was based on health screenings and was not meant to replace primary care.

Based on the findings of the school-based screenings, the community organization has implemented many identified interventions. The community organization has applied for and received several grants for funding to support needed interventions. As a result of the findings related to childhood obesity, walking programs have been implemented as pilot programs in some schools and a Diabetes support group for families and children has been formed. Interventions

to help alleviate the most pressing unmet health needs, such as dental and vision care, have been implemented. Health care professionals throughout the community such as nurses, nurse practitioners, physicians, dentists, and optometrists are instrumental in follow-up care based on referrals.

In response to the awareness that families need help completing forms to enroll children in available insurance coverage sources, insurance enrollment fairs were set up as a support to families. A major focus of the community organization has been publicity of programs and efforts to increase awareness through the local newspaper and fliers sent home with children through schools.

These interventions, and others which will be developed by the community in direct response to findings from school-based health screenings, will change the future for children and families in this rural Alabama community. It is only through interventions such as these, identified by the community, addressed by the community, owned by the, that the future and quality of life for generations to come will be impacted.

It is clear that health insurance plays a significant role in having a child's overall health needs met. It also affects a child's approach to health care in the future. Many health behaviors practiced during childhood will carry over into adulthood. It is imperative that every effort be made to ensure children's access to health care and enrollment in

an insurance program. Approaches such as the one used in this study can serve to identify potential health needs, educate children regarding health promotion and prevention behaviors, and increase parents' knowledge regarding the availability of programs that may aid in access to health care and consistent utilization.

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