

Barriers to Seeking Care Following School Vision Screening in Rochester, Minnesota

Barbara P. Yawn, Margary Kurland, Linda Butterfield, Bryan Johnson

ABSTRACT: School vision screening provides an effective way to identify children who require vision therapy, usually glasses. To benefit from screening, children with abnormal screening test results must receive follow-up eye care, but care may be delayed for months or years. This project used community focus groups in Rochester, Minn., to identify barriers that may delay seeking professional care following school vision screening. Major barriers identified included lack of community awareness about the frequency and potential effect of refractive errors in children, a parental perception of inadequate communication between schools and the parents and community, high cost of corrective lenses, limited availability of convenient eye care appointments, and adolescents' reluctance to wear glasses. Program planners developed a community action plan to address the perceived barriers. (J Sch Health. 1998;68(8):319-324)

School vision screening identifies children with vision problems who require corrective lenses or other therapy.¹ However, identification provides only the first step in the process of evaluation and treatment.² For a screening program to be effective, follow-up care for those who fail the screening must be available and used. In one study of school vision screening, the first visit to an optometrist or ophthalmologist following a failed school vision test required an average of 18 months. Unpublished data^{3,4} from two large metropolitan school districts confirmed this extended delay in follow-up eye care after failed vision screening.

Extensive delay in initiating eye care and treatment may leave children with impaired vision in classrooms for one to two school years. Impaired vision may negatively affect a child's ability to learn in the classroom.⁵ Therefore, it is important to reduce the time from first parental notification to first visit with an optometrist or ophthalmologist.

Reasons for delay in seeking care are not known and no study has been published that examined barriers to community eye care following school referral. This project identified reasons for the delay and barriers to obtaining professional eye care following parental notification of a failed school vision screening test. This knowledge will prove important in efforts to facilitate timely follow up and professional eye care in school children identified with vision abnormalities.

PROJECT PLANNING

Rochester, Minn., is a city of 79,000, in a rural area of southeastern Minnesota. The population of Rochester is more than 95% Caucasian with small groups of Southeast Asian and Somalian immigrant children. The city has one public and two private school systems for children in kindergarten through 12th grade. The three school systems were the site of a previously reported school vision screening study.¹

Barbara P. Yawn, MD, MSc; and Margary Kurland, RN, Dept. of Research, Olmsted Medical Center, 210 Ninth St., SE, Rochester, MN 55904; Linda Butterfield, MD, Dept. of Ophthalmology, Olmsted Medical Center, 210 Ninth St., SE, Rochester, MN 55904; and Bryan Johnson, OD, Rochester Family Eye Care, 307 Center St., E, Rochester, MN 55904. This article was submitted March 9, 1998, and accepted for publication June 15, 1998.

Focus groups of parents, children, teachers, school and community health professionals, and community leaders were convened to identify barriers to the timely follow-up of children who fail school screening. Due to confidentiality concerns it was not possible to identify and invite only parents who had delayed eye care for their children.

Ten focus groups of 8 to 12 individuals each were convened. Table 1 contains participant demographics. Members for each focus group were selected for maximum homogeneity, with heterogeneity across focus groups. For example, one focus group was entirely African American parents and another included primarily parents who were Southeast Asian immigrants. Groups were selected from neighborhoods with different economic levels to assure diversity in parents' socioeconomic and educational levels.

Parents and students were selected from volunteers who responded to announcements in the local newspaper, local church bulletins, newsletters of the local parent/teacher/student associations, and announcements in middle school health classes. A first grade class was volunteered by their teacher. Each focus group met on a single occasion for 1½ to 2 hours. Groups were facilitated by an experienced consultant from a community development firm. In addition, a trained observer was present at each meeting to take notes and make observations on nonverbal communications. All groups were taped after receiving permission from participants. Tapes were transcribed verbatim. The facilitator's outline for the focus groups, presented in Figure 1, was used to ensure that all content areas were covered during each group meeting and to provide a plan of progression for groups that were initially reticent to talk.

A community task force of school, health, and community leaders also was convened for the project. Task force members were invited to participate based on previously expressed interest, expertise, and their job descriptions. The community task force met five times. The first meeting was run as a focus group using the same format as the other community focus groups. Later meetings were convened to develop strategies to modify or eliminate barriers and problems in follow-up to failed school vision screening identified by the focus groups.

Systematic qualitative data analysis was completed by the focus group facilitator, the trained observer, and one author (BPY). After reviewing focus group transcripts and notes made by the facilitator and observer, themes and

domains were identified then reviewed and discussed by all three analysts. Using the initial list of themes and domains as a first draft, all transcripts were again reviewed by the three analysts. A revised list of themes and domains was developed by consensus. A list of subheadings under the themes was developed by one analyst (BPY) and reviewed, modified, and agreed upon by consensus of all three analysts. The action plan to deal with identified barriers was reached by consensus of the community task force. No further analysis was conducted on this plan.

PROJECT RESULTS

A total of 94 people participated in focus groups: 28 men, 66 women, (33 adolescents and children). The community task force, which also acted as one focus group, included two ophthalmologists, an optometrist, three school/public health nurses, two teachers, the public school district's director of student services, president of the local parent/student/teacher organization, a state senator, focus group facilitators, two community representatives, editor of the local newspaper, senior health reporter of the local NBC affiliate, and the principal investigator, a family physician researcher. The focus groups identified barriers in two domains: school issues and community issues.

School Issues

School issues were divided into two themes: 1) concerns regarding validity of the screening procedures; and 2) perceived lack of communication with parents and teachers regarding vision screening.

Figure 2 summarizes concerns expressed about the validity of vision screening. Each concern was expressed by at least three group members. Concerns repeated most frequently were those regarding adequacy of training for parent volunteers who perform the initial vision screening and whether or not health personnel rechecked the chil-

dren's vision before the child's parents were notified of the screening failure.

Parents were concerned that the Stycar vision screening test was too complicated for young children. Kindergarten and first grade children are asked to hold a card and match symbols on the wall plaque to those on the card. Parents and teachers of young children thought this complex second-level thought process might be difficult for some children, especially if they felt rushed by the line of children waiting behind them. Parents also wondered if all levels of screening failure were the same. Was a child with a screening test result of 20/40 less likely to need glasses than one with a test result of 20/100, and did both really need follow-up evaluation?

Parents were not aware of the frequency of vision screening. When told it was approximately every other year through eighth grade, several parents questioned the appropriateness of only screening every other year and wondered why high school students were not screened since the number of children failing vision screening tests increased as children got older.

The second major concern involved perceived lack of communication. In a nearly universal request, parents asked that they be informed by schools before school vision screening occurred. While vision screening information is included in the general information packet sent to grade school parents at the beginning of each school year, no parent remembered any notification prior to school vision screening. None of the parents remembered seeing any information in any school newsletter. Parents also wondered why teachers did not mention the need for follow-up of children who failed vision screening tests. None of the parents had ever been asked about glasses at parent-teacher conferences. Teachers stated that they were not told which students had failed the eye examination.

Parents thought notification of screening failures was most appropriate after the children's vision had been rechecked by the school nurse, and they were pleased that all notifications were mailed rather than sent home with students. However, parents suggested that notification letters require a parent's signature and a section to be returned by the eye care professional. Telephone follow-up was suggested for all children whose parents or eye care professional did not return the letter within a certain brief period of time, perhaps four to six weeks.

Several parents also commented on their confusion regarding the most appropriate choice of an eye care professional. Parents in two groups recommended the school develop or at least distribute a parent education piece explaining the relative attributes of optometrists and ophthalmologists and their scope of practice and costs.

Two additional items did not fit into either the validity or communication themes. Parents wondered if vision screening could be made more fun, and should another term besides "failure" be used for vision screening results that require a referral for additional evaluation. A few parents felt children might be upset by the term "failure."

Community Issues

Parents expressed several concerns regarding the follow-up eye care (Figure 2). The two most common concerns were cost of eye care and glasses and the "hassles" of

Table 1
Focus Group Demographics (N = 94)

Gender	
Men	28
Women	66
Age	
< 18	33
18 - 40	39
> 40	22
Race	
Caucasian	69
African American	14
Southeast Asian	11
Wear Corrective Lenses	
Yes	41
No	53
Life Roles *	
Parents	60
School Official/Teacher	6
Health Care Professional	8
Eye Care Professional	3
Media Professional	3
Community Volunteer	13

* May have multiple roles, therefore the total is greater than 94.

scheduling appointments. While the visit to the optometrist or ophthalmologist is covered under many insurance programs, the cost of glasses or contact lenses was seldom included with insurance benefits. Even under Medical Assistance, glasses were only available on an every other year basis without obtaining special approval. The Minnesota Medicaid regulations changed in 1997 to cover all new prescription lenses and replacements for lost glasses.

Appointments with ophthalmologists were reported as very difficult to schedule, often requiring four months or more. Few optometrist or ophthalmologist appointments, unless made through franchised optical shops, were available during the late afternoon, evening, or school holidays when students are out of school and parents are more likely to be home from work.

Parents expressed discomfort with the communication from optometrists and ophthalmologists who sometimes left the decision of whether or not to fill a glasses prescription to the parents' discretion by saying, "do what you think is important" or "you could get them now or just wait and come back in six to eight months." Parents said they needed more direct advice to understand the implications of not getting glasses.

Both minority focus groups, and one focus group assembled from a low-income area, felt racial and financial discrimination played an important role in their inability to receive prompt eye care. Five parents reported having an appointment delayed for more than three months when the provider's receptionist found the insurer was Medical Assistance or Minnesota Care, a subsidized insurance program for low-income families.

Group members also were concerned about family responsibility in eye care follow-up. While financial considerations were clearly an issue, group members were concerned that glasses and eye care were not priorities for many families. Little information was present in the lay literature regarding the need for glasses to treat common vision problems such as myopia. Therefore, many parents

and community members assumed that refractive errors and the need for glasses was really not an important issue until teens applied for a driver's license.

Community or peer pressure not to wear glasses also constituted a significant barrier to obtaining eye care and treatment. Teen-agers remembered that grade school students often were subjected to teasing from peers and older students regarding glasses. Several young teens said they would rather be unable to see than to wear glasses in school and when around friends. Conversely, first graders thought it would be "cool" to wear glasses since only one

Figure 2
Community Focus Group Results

School Domain

1. Process/Validity of vision screening issues:
 - Are parent volunteers well trained?
 - Do nurses recheck all failures?
 - Could the degree of 'failure' be reported?
 - Do younger children really understand what is being asked of them?
 - Why screen kindergarten students so soon again after preschool screening?
 - Why is every other year sufficient and is it OK to not screen high school students?
2. Communication issues:
 - Could parents be told what is happening and when? Put information in: orientation packets, newsletter, newspaper?
 - Can teachers be informed so they can tell parents or reinforce information?
 - Notices must be sent to homes by mail; phone calls would be helpful to those who have phones; what about translators?
 - Should schools require return of referral letters with parents' intent written on letter?
 - Should schools develop an informational piece concerning relative attributes of optometrists and ophthalmologists?

General Concerns

- Can we make this a fun experience?
- Isn't failure a pejorative word?

Community Issues

1. Concerns regarding the health care system:
 - Care, glasses and contacts are expensive and are seldom covered by insurance. Can insurance include vision care?
 - Appointments with ophthalmologists are difficult to schedule and afternoon appointments are very difficult to get. Can eye doctors save appointments for children who fail eye exams?
 - Discrimination is an issue for those with MA and MNCare. What can we do to stop this?
 - Can ophthalmologists and optometrists be more definite about younger child's need for glasses?
2. Concerns regarding families:
 - How do we deal with financial issues?
 - Cool frames are more expensive and not covered by MA. Can the range of frames be expanded?
 - How do we help parents see this as a priority?
3. Community awareness:
 - Why aren't vision problems discussed by schools, the media, or primary care clinicians?

Figure 1
The Focus Group Outline

- A. Introductions and warm up questions:
 - What is the dumbest thing you have ever heard regarding vision screening?
 - Did you participate in school vision screening as a child?
 - What were your experiences with your school vision screening?
- B. What has been your experience with vision screening in your children's school(s)?
- C. What do you think parents do (think) when they are notified that their child has failed vision screening?
- D. What do you feel should happen?
- E. Why do parents take their children to an optometrist or ophthalmologist after a child fails school vision screening? Why don't they? What are the barriers? What makes it difficult to get to an eye doctor or to get lenses?

person in their class was currently wearing glasses. Parents did not know how to combat the social pressure and stigma associated with glasses and understood other parents reluctance to pay for eye care or glasses that would not be used.

Action Plan

To address issues identified in the groups, the community vision task force developed an action plan. Concerns were prioritized by the frequency with which they were identified and their potential effect on the delay of children's eye care. Figure 3 outlines the action plan and responsible parties.

The almost uniform lack of parental awareness about the school vision screening program suggests a serious information gap between schools and parents. Task force members believed this problem should be addressed first. With cooperation from the school district, public health department, local newspaper, and parent volunteers, new information pieces were designed, including letters sent to parents before school vision screening, referral letters sent

to parents of children who failed screening, and notes to teachers of students referred for professional eye care. The letters all have new logos, art work, and large type with a brief message.

A public information campaign was developed to accompany the school letters. Public service messages were printed in the local newspaper and video and audio public service announcements are being developed. Professional athletes and local recording artists who appeal to adolescents are being included in the team developing the public awareness campaign. Statewide professional organizations of ophthalmologists and optometrists are facilitating efforts and developing plans to educate eye care providers statewide regarding the issue of delayed follow-up eye care.

Resources have been identified, such as the local Lions Club and Salvation Army, national optical companies, and the American Foundation for Vision Awareness, to help provide a broader selection of children's glasses frames at low or no cost to parents. Local optometrists and ophthal-

Figure 3
Community Task Force Action Plan

Goal I. *To increase accessibility to eye exams for children.*

Actions

- A. Set aside 2-4 appointments per week for children needing eye exams (providers)
- B. Dedicate one day per month for children's eye exams. (providers)
- C. Schedule evening/weekend appointments. (providers)
- D. Consider providing eye exams in school (providers, school, public health)
- E. Sponsor a 'Vision Screening Night' at Apache Mall (providers, business)
- F. Consider creating an 'Eye-Mobile Eye Care' program. (providers, business sponsor)
- G. Publicize the existing wide range of available appointment options. (providers, media)
- H. Publicize range of exam costs and financial assistance which is available. (providers, media, public health, PTSA)

Goal II. *To communicate to parents and to the public the importance and the urgency of addressing children's vision problems.*

Actions

- A. Create public service announcements for both electronic and print media stressing the importance of getting and wearing lenses. (media)
- B. Create clip art type graphics for newsletters and other printed materials. (media)
- C. Publish information on vision screening and the importance of follow-up in school newsletters and the area PTSA newsletter on a regular basis. (school personnel, PTSA)
- D. Develop a Health Care Corner in school newsletters. (public health)
- E. Develop a new parent notification letter that grabs attention and includes information about financial assistance that may be available. (public health, health committee)
- F. Include children's health issues on the 21st century partnership agenda. (media, providers, business community, parents, schools)

Goal III. *To encourage a coordinated effort between school personnel, public health, parents, and providers.*

Actions

- A. Present information regarding this study and related issues to classroom teachers at staff meetings and through the district health committee. (principal investigator, schools, provider)
- B. Attempt to clearly articulate the correlation between vision problems and learning difficulties. (researchers, schools, public health)
- C. Develop a system to inform classroom teachers when a child fails the vision screening tests. (school health committee, public health)
- D. Enlist assistance of classroom teachers in encouraging parents to follow up on needed exams and in encouraging children to wear their glasses. (schools, parents, PTSA)
- E. Change the parental notification procedure in the nonpublic schools so that failure notifications are mailed to parents. (school health committee, public health)
- F. Include information regarding the validity of the screening process in orientation materials and newsletters for parents. (school, public health)

Goal IV. *To ensure the validity of the school vision screening process.*

Actions

- A. Review/reassess the screening tool used with younger children. (researcher)
- B. Review the effectiveness and the challenges associated with using parent volunteers to conduct screening. (volunteer coordinators, public health)

mologists have set aside early morning and late afternoon appointments each week for children who fail school vision screening tests, and one medical group provided free ophthalmology evaluation to children in the local shopping mall. The school district and local department of health developed lists of resources for parents needing financial assistance with vision screening and glasses, and Minnesota Medical Assistance regulations have been modified to cover yearly eye care and glasses and replacement glasses for lost or broken lenses or frames.

PROJECT IMPLICATIONS

From information provided in focus groups, schools, health professionals, and public health organizations have not adequately communicated to parents the importance of professional eye care or corrective lenses for children with abnormal vision. In addition, access to eye care also appears to be limited by the availability of convenient appointment times and the financial resources for both office visits and purchase of corrective lenses.

These knowledge, access, and financial barriers are similar to barriers identified in other studies of children's health care needs. Studies of barriers to completion of childhood and adult immunizations identify cost, knowledge, and medical organizational factors such as appointment scheduling and long waits as barriers to receiving immunizations.⁶⁻¹⁴ Three immunization barriers studies that included focus groups comparable to this project also report similar barriers: cost, medical care system barriers, employment conflicts, and parental lack of knowledge.^{10,15-17} Parents also suggested similar solutions including a media information campaign, greater diversity of appointment times, lower cost services and better insurance coverage, and recognition that receiving care is a complex task requiring organization and planning.^{15,16}

Studies of barriers to receiving other types of care identified another factor not identified in this project. Adolescents, pregnant women, and children were more likely to receive "appropriate" care if they had a regular source of medical care.¹⁸⁻²¹ Few families have a regular source of eye care. Therefore, it may be helpful for family physicians, pediatricians, and adolescent health care providers to include vision screening or evaluation in their care of children and adolescents. Recommendation for additional care from a personal physician increases compliance with other types of health care services.¹⁹⁻²³

Studies of adolescents suggest it may be difficult to overcome teens' reluctance to wear glasses since teen's major health concerns involve personal image.²⁴⁻²⁷ Increased access to contact lenses for all teens and adolescents may encourage acceptance of the need for vision correction. This situation may require a change in the public's perspective from contact lenses as cosmetic devices to contact lenses as a first line source of vision therapy.

Qualitative studies can include only moderate numbers of people. Therefore, they may not capture all the barriers, especially those unique to small groups of parents or families. However, repetition of parental and community concerns and identification of only one additional barrier in the sixth, seventh, and eighth focus groups suggest that the most common barriers were included.

Likewise, this study community may not be representa-

tive of all communities across the United States. However, the groups included at least three racial groups and a cross section of educational achievement and socioeconomic levels. Some school communication issues may have different implications in other school districts, but lack of community awareness seems widespread, since more than one-half the group members had children previously enrolled in school districts in other communities both inside and outside Minnesota.

CONCLUSION

Barriers to vision screening follow-up identified by parents, teachers, and health professionals proved similar to barriers identified in other areas of children's health care: costs, systems, and knowledge. However, lack of emphasis on school-age children's vision by primary care physicians, the medical community, and the media appear to compound these barriers. While one in five children may need corrective lenses by high school graduation, parents appear poorly informed about myopia and other common visual abnormalities. Few insurance programs provide coverage for vision therapy — glasses and contact lenses.

Schools, public health agencies, media, and children's health care professionals need to inform parents about the importance of timely and adequate eye care. Working alone, schools are unlikely to solve this health problem. ■

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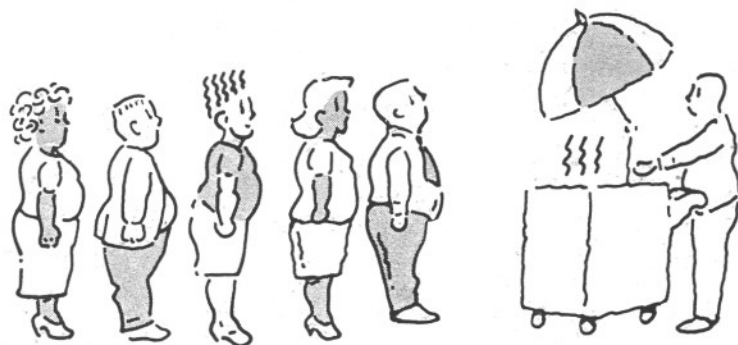
Statement of Purpose

The *Journal of School Health*, an official publication of the American School Health Association, publishes material related to health promotion in school settings. *Journal* readership includes administrators, educators, nurses, physicians, dentists, dental hygienists, psychologists, counselors, social workers, nutritionists, dietitians, and other health professionals. These individuals work cooperatively with parents and the community to achieve the common goal of providing children and adolescents with the programs, services, and environment necessary to promote health and improve learning.

Contributed manuscripts are considered for publication in the following categories: **Articles, Research Papers, Commentaries, Teaching Techniques, and Health Service Applications.** Primary consideration is given to manuscripts related to the health of children, adolescents, and employees in public and private preschools, child day care centers, kindergartens, elementary schools, middle level schools, and senior high schools. Manuscripts related to college-age young adults are considered if the topic has implications for preschool through high school health programs. Relevant international manuscripts are also considered.

Prior to submitting a manuscript, prospective authors should review the most recent "Guidelines for Authors," printed periodically in the *Journal*. Copies may also be obtained from the *Journal* office, P.O. Box 708, Kent, OH 44240, or electronically from treed@ashaweb.org.

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