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Are Pediatric Practice Settings Adolescent Friendly? An Exploration of Attitudes and Preferences

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Summary: This study describes adolescent preferences about offices and waiting. Fifty-four adolescents participated in 12 discussion groups, which were audiotaped and transcribed. The transcripts were analyzed qualitatively. Two themes emerged about the health care environment: (1) making the interior design less childish, more teen-oriented, and more home-like; and (2) decreasing waiting time and enhancing waiting experience by providing teen diversions (e.g., magazines, tv, games). Teens preferred that artwork portray realistic images, that medical paraphernalia be hidden, and that colors be neutral. Modifying interior décor, constructing smaller subwaiting areas, and incorporating diversions that are teen-oriented may help promote positive health care experiences and utilization by adolescents. *Clin Pediatr.* 2004;43:55-61

Introduction

Despite increased attention to adolescent health needs and access to care, there has been little change in adolescent utilization of primary care services through physician offices over the last decade.¹ The high rates at which adolescents

utilize emergency services compared to other age groups suggest that good health does not explain their relatively low use of office services.¹ Rather, the behavioral preference for emergency over office care raises questions about the acceptability, accessibility, and attractiveness of office care to adolescents in the United States.

Many studies of adolescents have explored the association of utilization with health insurance, provider characteristics, confidentiality, office location, hours of operation, and transportation.²⁻⁵ Although studies of adults suggest that the physical milieu within the clinical setting and the experience while waiting to be seen within that milieu are strongly associated with satisfaction with care,⁶⁻¹³ the effect of these same factors on adolescent patients is poorly understood.

The goal of this study was to describe adolescent preferences regarding the milieu of health care sites as well as their preferences and expectations while wait-

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ing to be seen. Creating an environment that appeals to adolescents and enhances their health care experience may be an important step toward improving the care experience and promoting effective health care for all adolescents.

Methods

Subjects

The study population consisted of adolescents aged 11 to 19 years who were in good health or who had diagnoses of cystic fibrosis, juvenile rheumatoid arthritis, sickle cell disease, or inflammatory bowel disease established at least 2 years earlier. The healthy adolescents were recruited from summer recreation programs, a church, and a school. They reported their usual sources of care as pediatricians' offices, community health centers, and hospital-based pediatric clinics. The adolescents with chronic conditions were recruited from hospital subspecialty programs. Potential subjects and their legal guardians received invitation letters, followed by telephone calls, explaining that the study would involve discussion groups of 10–12 adolescents each, separated by age (11–14 years and 15–19 years), gender, and the presence or absence of a chronic condition. The study sample consisted of 54 adolescents divided into 12 focus groups, and the size of the groups ranged from 2 to 10 adolescents. Five of the 12 groups included adolescents who were healthy, and 7 groups included adolescents with chronic conditions. Table 1 summarizes the participants' characteristics. The study protocol was approved by the hospital's Institutional Review Board. Subjects aged 18

Table 1

Age	Chronic Illness		Healthy	
	Male	Female	Male	Female
11–14 yr	6	11	8	5
15–19 yr	7	5	4	8

years and older provided their own written informed consent. Subjects younger than age 18 years and their legal guardians both provided written informed consent.

Data Collection

A discussion guide for the moderator was constructed based on the literature and the investigators' clinical experience. Major topics for discussion included health promotion and risks, preferred physician characteristics, and preferred site characteristics (e.g., physical environment, waiting time, and appointment scheduling). The discussion guide was modified over time to allow later groups to discuss topics raised by earlier groups and to limit discussion of topics where little new information was forthcoming.^{14,15}

The same nonclinician, professional facilitator conducted all groups. One to 3 members of the research team attended each group discussion and took notes regarding the process. All of the discussions were audiotaped, and subjects were told that their comments would remain confidential. The facilitator guided the discussion to ensure that all topics were covered. To open the discussion regarding office environment, the facilitator asked open-ended

questions such as, "What do you think about your doctor's office," "What does your doctor's office look like," or "If you were to design a doctor's office, how would you design it?" Following the discussion, the facilitator and observing investigators met alone to discuss and record their impressions of the group process.

Data Analysis

The group discussions were transcribed verbatim from the audiotapes and edited for accuracy. Four members of the research team (a psychologist, a social worker, and 2 physicians) then analyzed the data qualitatively. During the first phase of analysis, each edited transcript and associated field notes were read independently by the research team members using Crabtree and Miller's "editing" organizing style.¹⁶ In 1- to 3-hour sessions, the team reflected on and discussed their observations and began preliminary interpretation of that focus group. Team members then individually generated themes for each group, which were consolidated into consensus themes at subsequent meetings. Finally, the team compared and contrasted group themes and generated a comprehensive coding scheme.

In the next stage of the analysis, the transcripts and the coding scheme were imported into the qualitative text analysis software package N5 NUD*IST®.¹⁷ The coding scheme was then systematically applied to 2 transcripts by 1 author (TT). These transcripts were then completely recoded by another author (MB). As suggested by Patton,¹⁸ discrepancies in coding were resolved by negotiation. The remaining transcripts were then coded by a single researcher, aided by discussion with other team members over unclear or confusing statements.

The first author reviewed the coded transcripts line by line and used the NUD*IST® Node Search feature, to identify all comments related to the current study. Major themes were identified, and data unrelated to the study objectives were excluded.¹⁴ About 10% to 20% of the discussions in each transcript contained information relevant to the objective of this study. The findings were further discussed among the research team, and then the transcripts were reviewed a final time to search for inconsistencies, disconfirming data, and alternative explanations.

Results

Two major themes emerged from analysis of the coded data regarding the health care environment: (1) making the interior design of physicians' offices more adolescent friendly and (2) improving the length and experience of waiting to be seen by the health care provider. Subjects repeatedly expressed dissatisfaction with the physical appearance of waiting areas and examination rooms, the long waiting times, and the lack of interesting diver-

sions (e.g., magazines, television, games) to occupy their time while waiting to be seen.

Interior Décor

Subjects reported that they frequently waited and were seen in rooms designed or decorated for younger children, which they disliked. When a 14-year-old male with Crohn's disease was asked how he would improve the environment, he answered, "I would make it more of a teenage environment. The environment they got now is more for, like, little kids. . . . I'd just make it seem more mature." Another 14-year-old male with cystic fibrosis said that the examination rooms he visited had wallpaper with pictures of "little palm trees and spiders and bugs," commenting, "It's, like, really, really annoying to me. We're not teeny tiny little kids." A 17-year-old female in good health also responded negatively to the childish décor in her doctor's office:

"The environment—it's set up for little kids. I mean, you go to a pediatric office and a 3-year-old would like what's in there. And there's Winnie the Pooh wallpaper and there are little balloons and clowns all over the place, and I'm, like, ok, I'm 17 years old now."

Many 11–14-year-old subjects suggested decorating the rooms with teen-oriented posters of famous musicians, athletes, actors, etc. One 13-year-old healthy female commented, "Even if they have, like, musical groups, like posters on the walls and stuff, it would make you feel more comfortable because that's what you're around every day."

The older adolescents varied in their preferences about décor. For example, a 17-year-old healthy female stated that there should be some rooms with "plain wallpaper," and a 17-year-old male with cystic fibrosis said, "Maybe just, you know, decorate it like you would have a normal house—not like a playroom, because that's not what it is. This is a hospital." In contrast, a 17-year-old female with Crohn's disease and a 19-year-old female with ulcerative colitis said they liked the colorful designs geared toward younger children in their physicians' offices and would not redesign the interiors. One commented about the wall design: "They've got every animal. It's kind of neat, and also got little kids, but it's kind of, like, oh, that's really cool." Another 15-year-old female with sickle cell disease also stated: "Those decorations don't really bother me [referring to décor for younger children]. In my room, I got cartoon characters like Winnie the Pooh, Tweety, and Mickey Mouse. I like to hang those kinds of pictures up."

Examination Rooms

Discussions about the appearance of examination rooms focused on the visibility of medical equipment and medical illustrations. Adolescents expressed discomfort with visible medical paraphernalia. A 13-year-old healthy female stated, "It's one white room with a bunch of things hanging on the walls, like all these, like, needles and stuff. I would appreciate if they'd put that in the closet or something." A 12-year-old female with cystic fibrosis noted that seeing posters of the human anatomy might increase adolescent anxiety about the visit: "You forget what you're doing there and then they just re-

mind you by looking at these posters." She also implied that the content of anatomical posters might be inappropriate, confusing, and even revolting for children: "I think they're, like, more for adults, because little kids don't understand them. They're not pleasant to look at; they're kind of disgusting." Only one subject, a 14-year-old male with cystic fibrosis, expressed a neutral opinion about the visibility of medical paraphernalia or medically oriented education materials: "I don't get all happy. . . . Oh these posters! I don't really care, you know."

The adolescents thought that medical posters and other educational material should be used only in the context of a specific interaction with their doctor or nurse about their condition or problem. They reported that they were unlikely to read general health education while waiting and preferred teen posters and leisure reading material to function as a distraction.

Furniture

Some subjects, most of whom had chronic illnesses, stated that the furniture in the examination rooms should be more comfortable. When asked to suggest specific changes, a 13-year-old male with sickle cell disease said, "Put a sheet on their beds because their beds are hard as a rock." A 12-year-old female with cystic fibrosis said, "Get new beds. And make them comfortable."

Separate Facilities

Subjects were split in their opinions about separate facilities for young children and adolescents. Age, but not gender, seemed to influence opinion. Younger adolescents preferred separation, while older adoles-

cents seemed more neutral on the issue. For example, when asked about separating the waiting areas for younger children and adolescents, a 14-year-old male with cystic fibrosis said:

"That's actually pretty cool. I think that's a good idea to have it so that there are not little kids running around so the older kids don't actually trip on them. They do! They run around in here; they're like 4 feet tall, and it's hard not to step on them."

A 17-year-old male with cystic fibrosis stated:

"In a hospital like this, the name "Children's Hospital" implies that mostly the patients here are going to be children and not kids our age. And so there's no real use, I don't think, in building a whole new waiting area just for 10% of the patient population. . . . It's a waste of money."

When a 19-year-old female with ulcerative colitis was asked whether she would like waiting areas grouped by age, she said that she disliked "getting categorized" and indicated that she did not mind being with younger children:

"You would get kind of mad you're getting categorized and stuff like that. If I'm having a bad day, I'll sit in the corner so no one bothers me and stuff like that, but if I'm having a good day, I'll go over and play with the little kids."

A 16-year-old female with Crohn's disease commented re-

garding separate adolescent waiting areas: "I think we'd kind of all stare at each other." A 15-year-old male with sickle cell disease also remarked: "If there were all older kids, it would probably be even more boring because nobody would probably want to say anything to anyone."

On the whole, subjects seemed more interested in separate examination rooms for children and adolescents than separate waiting areas. One 11-year-old female with juvenile rheumatoid arthritis stated that teen rooms could have teen posters and children's rooms could have children's posters:

"They should make a section for babies, like toddler ages in which they should put posters like, probably Blue's Clues or Out of the Box [referring to children's television shows] or something like that, but for older teenagers, they should put, like, Britney Spears or Christina Aguilera or *NSYNC [referring to rock/pop singers] or something like that. If I were in the Backstreet Boys poster room, it would make me feel comfortable because I like them."

Overall, the adolescents had many complaints, as well as suggestions, on designing physicians' offices to be more appealing for their age group. Most suggested that the interior design of physicians' offices be less pediatric, less "hospital-like," and more home-like, which would include more neutral colors, more teen posters, little visible medical paraphernalia or equipment, and more comfortable furniture.

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Waiting: Duration and Diversions

The length of waiting time and the lack of activities while waiting were topics brought up often in the focus groups. Both adolescents with chronic illnesses and healthy adolescents disliked waiting at their doctors' offices, and most thought that the wait times were too long. Total wait times of 15 to 45 minutes generally were considered acceptable, while wait times that lasted up to an hour or more were considered "too long." One 14-year-old male with cystic fibrosis described his frustration with wait times that could last up to 3 hours: "Getting aggravated pretty much. Just kind of blowing off steam, blowing my top." One 13-year-old female with ulcerative colitis criticized the offices for their inefficiency and commented that she once had to miss an appointment because the wait was too long:

"That's another thing I'd like them to improve [referring to waiting time]. They're always behind schedule. One time my mom had to reschedule our appointment because we had to go somewhere, and I didn't even get checked up that time."

Many adolescents complained that they did not have anything to do while waiting to be seen. A 15-year-old male with sickle cell disease said, "I've been there all day; it doesn't make sense—don't have anything to do but just sitting there looking bored." A 19-year-old female with ulcerative colitis noted her particular dislike of waiting in the examination room:

"I hate that, I hate waiting in that room . . . and the nurse is, like, what's wrong

with you today, and writes it down and closes the door. Then you sit there, twiddling your thumbs for, like, an hour."

In discussing the lack of activities, the adolescents stated that there was little reading material, media entertainment, or games that appealed to them. Reading material was mentioned most often, and many adolescents commented that there were too many magazines and books for young children and parents, such as *Sesame Street* magazine and *Parents* magazine. One 15-year-old healthy female recommended that there should be various types of magazines for everyone: "Like *YM*, *Seventeen*, you know, teen magazines, and for guys, like *ESPN* or something like that, and just something for little kids, like *Nickelodeon* magazine." Magazines suggested by other adolescents included *Teen People*, *Teen* magazine, *Vibe*, *Source*, and *Sports Illustrated*. Some subjects requested that televisions in waiting rooms be tuned up to cable channels geared toward adolescents rather than to programs for younger children. For example, a 14-year-old male with cystic fibrosis said:

"They've only got like 4 channels, which are Disney, Nickelodeon, ESPN, and whatever, and they don't have anything like teen channels, like MTV. They all have little baby stuff like The Disney channel."

In addition to MTV, television channels that adolescents requested were HBO and Discovery channel. However, one 14-year-old male with sickle cell disease noted that MTV might not be appropriate, especially in waiting ar-

reas with younger children: "Sometimes, they use the curse words on those shows." Many adolescents noted that the typical toys and games in doctors' offices, such as building blocks or indoor playgrounds, did not appeal to them. A 13-year-old healthy male stated, "Mostly the stuff you see when you go to the doctor's office is for kids: chalkboards, toys, cars—little baby toys. I don't like that." Males in particular requested that there be games for teenagers, such as computer and video games. However, one group of older males with chronic illnesses commented that video games might not be "durable" in waiting areas: "They'd just get all beat up. \$200—you spend it and then in a month, it's not useful. You wouldn't be in there long enough to get into anything like that."

Health Education Materials

Most subjects preferred non-educational diversions to health education materials in waiting areas and examination rooms. When asked about viewing health information websites or television channels while waiting, a 14-year-old male with cystic fibrosis said, "I'm not really into that. I'm usually sleeping or playing Nintendo or something like that." When asked about health information brochures in a doctor's office, a 17-year-old male with cystic fibrosis said:

"The problem is that the world is full of slackers, and if it requires time to sit down and read something, they're not going to. If they can just ask somebody and get the same information, why read it?"

This subject explained that he preferred to ask his doctor spe-

cific health-related questions than to look for answers in pamphlets or brochures. Adolescents who expressed uninterest in health-related materials available in outpatient settings generally said they already knew the information that these materials tended to contain.

Discussion

Adolescents in our study tended to prefer environments that were more mature, or less geared toward infants and younger children. Although there has been little empirical study of adolescents' preferences regarding the design of physicians' offices, these findings are consistent with one qualitative study of adolescent views¹⁹ of outpatient services and general recommendations by professional organizations and textbooks that décor be age appropriate.^{20,21} Sharpe²² notes that older children prefer realistic pictures and paintings, while younger children prefer designs that are based more on color and subject matter rather than on realism.²² Most of the subjects in our study preferred realistic images, such as posters of musical groups and sports teams, rather than whimsical, cartoon-like images. They liked office environments that were comfortable, familiar, and free of visible paraphernalia. They disliked uncomfortable furniture in waiting rooms, consistent with adolescents' views in another study.¹⁹ Experts on health care design for children echo the sentiments of these adolescent subjects in calling for clinical surroundings that are home-like and soft.²³

There was less agreement among participants, however,

about separate waiting facilities for younger and older children. Most 11–14-year-old adolescents preferred separation, while most 15–19-year-old adolescents had no preference or did not mind waiting with younger children. This may reflect the more intense peer orientation characteristic of early to midadolescence.²⁴ A few older subjects even expressed discomfort with adolescent segregation, implying that they might “stare at each other.” Similarly, a recent study of British adolescents found that adolescents were uncomfortable in waiting rooms since they were “objects of interest” to other patients.²⁵ This may be suggestive of adolescent egocentrism, in which adolescents believe that others are as engrossed in the details of their conduct and appearance as they are, causing them to be extremely self-conscious.^{26,27} Clinical remodeling to accommodate separate facilities for adolescents, therefore, may be less important than simpler changes, such as decorating rooms with teen posters or selecting neutral colors and simple wallpapers for the room decor. The Adolescent Medicine Committee of the Canadian Paediatric Society suggests a small waiting area for adolescents with age-appropriate furnishings and diversions that can be separated from areas for younger children by partial dividers (e.g., an aquarium) rather than by floor-to-ceiling walls. The Committee does strongly recommend, however, separation of child and adolescent examination rooms,²⁰ which can accommodate age-appropriate furniture as well as the child's preference for positive distractions in décor and the adolescent's preference for simplicity.²¹

The dissatisfaction with waiting time and experience ex-

pressed by the adolescents in our study are consistent with the findings of other investigators.⁶⁻¹³ Improved office efficiency and scheduling can decrease waiting time for patients but can be difficult to achieve. Modifying the physical environment and providing appealing diversions can improve the waiting experience rapidly and at relatively low cost. Adolescents in our study preferred diversions such as teen-appropriate magazines, watching television, and playing computer games, rather than educational diversions, such as health pamphlets or health media (televisions, internet, etc.). Although educational information is helpful and should be available in the reception area, many adolescents expressed their uninterest in reading health educational materials while waiting, and one even stated that physicians should be directly available for educating adolescents.

Our study has some limitations. Although the adolescents were a racially mixed group from different areas of the city, we did not ask the individuals about their ethnicity or socioeconomic status. These factors likely influence their perceptions and attitudes. Since understanding the impact of sociocultural variables was not the focus of our study, we did not design our groups to explore these questions and thus cannot comment on their potential impact. Further, perceptions of these adolescents may not be generalizable to adolescents in other regions, although our findings are similar to those of the few previous studies in this area.

Although adolescents in one study ranked certain physical environment characteristics, such as magazines, as least important for their primary health care when

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compared with services such as confidentiality, available health information, and friendliness of staff,²⁸ our study did not rank primary care services or characteristics. Our exploration of attitudes and preferences showed that subjects frequently complained about the lack of diversions, the length of waiting time, and the childish surroundings in waiting rooms and, thus, requested more adolescent-friendly surroundings. Other studies have shown that adolescents commonly complained about too much time spent waiting²⁸ and boredom while waiting.²⁵ Although office décor and diversions are perceived to be less important in primary care quality, waiting experience and waiting time greatly influence patient satisfaction. Improving waiting time and experience are both important. Our study suggests that improving waiting experience, by creating subwaiting areas and providing adolescent-appropriate diversions, may be relatively simple and low cost. Improving the waiting experience and office environment is one step toward encouraging adolescents to utilize primary care services. Perhaps an office environment that welcomes and treats adolescent patients well implies similar treatment by the physician.

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