Interview Strategies Commonly Used by Pediatricians

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Objectives: To describe the pediatric interview as it is conducted in different practice settings and with children ranging in age from infancy to adolescence, and to identify pediatric history-taking strategies that varied across age groups.

Participants and Methods: A self-administered survey was designed and mailed to a group of pediatricians in the Chicago metropolitan area to assess commonly used strategies in the pediatric interview across varied patient ages and settings. The pediatricians sampled varied by geographic location as well as by practice setting.

Results: Results of the survey indicated that pediatricians use common strategies for establishing rapport, calming the disruptive child, and obtaining information from the child within particular age groups, but vary these strategies as the child matures.

Conclusions: The findings substantiate the influence of the developmental stage of the child on interview strategies used by pediatricians. Implications pertaining to development of a standardized teaching curriculum for the pediatric interview are also discussed.


Editor's Note: This study shows what we all know: pediatricians are still children at heart and love to play. The added bonus is that it makes us more effective in our work.

Catherine D. DeAngelis, MD

THE PEDIATRIC medical interview is quite different from the adult medical interview, yet very little literature exists on this important topic. In the pediatric interview (PI), the interaction involves the child, parent, and physician triad, creating a different dynamic from that of the one-on-one interaction of the adult interview. Second, the different developmental stages of children require variations in approach that are quite different from techniques used in interviews with adults. Because of these differences, the interview techniques used by pediatricians across age groups are not as standard as those used by physicians in adult interviews.

The literature on the PI primarily has examined areas such as patient and parent satisfaction and compliance with a prescribed regimen.\(^1\)\(^2\\) Korsch\(^4\) proposes that research in the medical interview should examine how physicians inform and educate patients to ensure understanding, satisfaction, and compliance. As important are variables related to the structure and process of the PI. To date, no published studies describe the PI as it is commonly practiced. For example, the developmental stage of the child is a primary structural component of the PI that is likely to influence the physical location of the child during the interview and both the content and sequence of the questions asked. The purpose of this descriptive study was to characterize the PI as it is conducted in different practice settings and with children ranging in age from infancy to adolescence. We were interested in identifying common interview strategies used by pediatricians and in identifying strategies that varied among age groups.

RESULTS

Of the 573 surveys sent, 26 (5%) were returned with the notation that the pediatrician to whom the survey had been sent had relocated, retired, or died. Of the remaining 547 surveys, 250 (46%) were completed and returned. Of the completed surveys, 189 (76%) were returned within 4 weeks of the first mailing, and an additional 61 (24%) were completed and returned in response to the postcard and second mailing. Follow-up telephone calls to a 10% sample of nonrespondents showed...
SUBJECTS AND METHODS

SUBJECTS

Our sample of pediatricians was drawn from the Fellowship Directory of the American Academy of Pediatrics, Elk Grove Village, Ill. Using a 100% sampling plan, we identified names and office addresses of all pediatricians listed in this directory who practiced within the Chicago metropolitan area. This list included 200 pediatricians practicing within the city of Chicago and 373 pediatricians practicing in suburban communities within a 10-mile radius of the city limits.

DATA COLLECTION INSTRUMENT

In consultation with a panel of general academic pediatricians, practicing general pediatricians, and survey research specialists, we developed a 36-item, self-administered survey designed to examine the PI as it is conducted in different practice settings and with patients ranging in age from infancy to adolescence. The survey included items specific to the pediatric well-child interview. Items were designed to examine both the process and the content of the PI as it is practiced with infants (0-15 months), toddlers (15 months to 2 years), preschool-aged children (3-5 years), school-aged children (6-12 years), and adolescents (≥13 years). Interview process variables included the location of the child during the examination, presence or absence of the parent, and strategies used for building rapport with the child and for calming the child. Interview content variables included the amount of interaction with the child, the amount of medical history obtained from the child, and the general types of questions asked of the child. For older, more verbal children, we also assessed the general types of information asked of the patient and the amount of history obtained from the child. We also asked at what ages specific sexual and substance use issues were first discussed. Specific response options to survey questions were determined by the results of open-ended interviews conducted earlier with practicing pediatricians. To address the likelihood that individual pediatricians use many strategies with children of a given age group, a multiple-response format was used in which respondents could indicate more than 1 response to questions pertaining to rapport building, calming, and types of information discussed. Additional survey items were used to characterize the practice setting and clinical experience of respondents.

The survey questionnaire, along with an introductory letter and return envelope, was sent to each of the 573 pediatricians selected for inclusion in the survey. After 4 weeks, a postcard reminder was sent to those who had not responded (nonrespondents). After an additional 4 weeks following the postcard reminder, a second letter and survey were sent to those who still had not responded.

that respondents and nonrespondents did not differ with respect to geographic location ($\chi^2 = 2.45, P = .29$), practice setting ($\chi^2 = 0.64, P = .96$), years in practice ($t = 0.53, P = .60$), or daily number of patient visits ($t = 1.51, P = .13$).

Among respondents, practice settings reported were private group practices, 119 (47%); university-based clinics, 46 (18%); private solo practices, 36 (14%); community clinics, 26 (10%); and health maintenance organizations, 23 (9%). The pediatricians who responded to the survey were almost equally distributed between urban, 121 (48%), and suburban, 129 (52%) settings and between the sexes (48% male respondents and 52% female respondents). On average, survey respondents had been in practice for 11.8 (SD, 9.8) years and saw an average of 23.8 (SD, 11.2) patients per day. Female respondents had been in practice for significantly fewer years than had male respondents (9.4 vs 14.8 years) ($t = 4.27, P = .01$), but they saw an equal number of patients per day (24.7 vs 23.2 patients) ($t = 1.01, P = .32$). Respondents indicated that 32% of their patient visits were with infants, 23% with toddlers, 18% with preschool-aged children, 15% with school-aged children, and 11% with adolescents.

INTERVIEW PROCESS

Patient and Parent Location

The location of the child during the PI changes as the child matures, as shown in Figure 1. The most common location for both infants and toddlers during the interview was reported as in the parent’s lap or arms. A substantial number of toddlers moved freely about the examination room during the interview, while few were interviewed on the examination table. Preschool-aged children most frequently moved freely about the examination room; other common locations were the examination table, in the parent’s lap or arms, and in a chair. The school-aged child was most frequently interviewed on the examination table; other common locations were in a chair or moving freely about the examination room. The adolescent was most frequently interviewed on the examination table; another common location was in a chair.
As children mature, pediatricians more frequently conduct at least part of the interview without the parent present. While 79% of the pediatricians sampled indicated that the parents of school-aged children were present throughout the interview, very few pediatricians (8%) reported that parents of adolescents were present throughout the interview.

**Rapport-Building Strategies**

As the child matures, fewer nonverbal strategies are used for building rapport (Figure 2). Many strategies were used with infants, with 71% of the respondents using 3 or more strategies and very few (2%) doing nothing to build rapport. The individual rapport-building strategies most frequently used with infants were talking, touching the child, making sounds, sharing toys, and holding the child. Many strategies were also used for building rapport with toddlers, with 44% of the respondents using 3 or more strategies and very few (2%) doing nothing. The individual rapport-building strategies most frequently used with toddlers were talking, sharing toys, making sounds, and holding the child. Among preschool-aged children, 35% of respondents used 3 or more strategies for establishing rapport, and only 2% did nothing to build rapport. The individual rapport-building strategy most frequently used with toddlers was talking to the child; sharing, toys and giving a drawing project were also commonly used rapport-building strategies. Female respondents used 3 or more strategies for establishing rapport, and very few (2%) doing nothing. Female respondents were significantly more likely than male respondents to use toys to calm the infant (64% vs 49%) (χ² = 4.93, P = .026) and the toddler (75% vs 54%) (χ² = 12.20, P = .001). Female pediatricians also were significantly more likely than male to use drawing projects to calm the preschool-aged child (48% vs 26%) (χ² = 12.00, P = .001).

**Calming Strategies**

Strategies reportedly used for calming the upset or disruptive child were much the same as those used for building rapport. With younger children, several calming strategies were used. Very few (2%) of the pediatricians sampled reported that they did nothing. As the child matured, fewer nonverbal calming strategies were used. The female pediatricians sampled were significantly more likely than male to use toys to calm the infant (64% vs 49%) (χ² = 4.93, P = .026) and the toddler (75% vs 54%) (χ² = 12.20, P = .001). Female pediatricians also were significantly more likely than male to use drawing projects to calm the preschool-aged child (48% vs 26%) (χ² = 12.00, P = .001).

**INTERVIEW CONTENT**

**Amount of History**

Preschool-aged children begin to emerge as a source of information on their medical history; 84% of pediatricians reported obtaining at least some of the history from this group. School-aged children are clearly a source of information on their medical history, with 97% of pediatricians obtaining some (53%) or most (44%) of the history from this group. Adolescents are the major source of information on their medical history, with 98% of pediatricians obtaining some (7%), most (69%), or all (22%) of the history from this group.

**Types of Questions**

As the child matures, a greater variety of questions are commonly asked by pediatricians. With preschool-aged children, pediatricians reported commonly asking questions about school activities, friends, and toys. With school-aged children, questions about the medical history and about the child’s life and interests, such as school, family, friends, and food, were commonly asked. Specific substance use and sexual issues are openly discussed with adolescent patients. Substance use issues were, on average, first discussed at the age of 12 years. In both urban and suburban practice settings, discussions of smoking, alcohol, and other drugs were initiated at about the same ages (urban vs suburban means [SDs], 11.6 [2.2] vs 12.0 [2.3], 12.0 [2.3] vs 12.4 [2.1], and 11.8 [2.5] vs 12.2 [2.4] years, respectively; all P > .14), although female pediatricians reported initiating discussion of smoking at an earlier age than did male pediatricians (11.5 [2.5] vs 12.2 [2.0] years; t = 2.31, P = .02). The sex-related topics of sexually transmitted diseases (STDs), human immunodeficiency virus (HIV) and AIDS, sexual history, and pregnancy were, on average, first discussed with patients at the age of 13 years (means [SDs], 12.8 [1.5], 12.8 [1.5], 12.9 [1.5], and 13.0 [1.6] years, respectively). However, as shown in Figure 3, pediatricians who practice in urban settings reported first discussing sexual topics with their patients at a significantly earlier age than did pediatricians who practice in suburban settings (all P < .001). In urban settings, discussion of STDs, HIV and AIDS, sexual history, and pregnancy were initiated at mean (SD) ages of 12.4 (1.5), 12.4 (1.6), 12.4 (1.4), and 12.6
Our previous research suggested that pediatricians include all children in the PI in developmentally appropriate ways. The findings of this study further substantiate and reflect the influence of the developmental stage of the child on the interview strategies used by the pediatrician.

As in many surveys of practicing physicians, this study was limited to self-report data. Self-report data are commonly used in studies of the practice behavior of physicians, and validation of self-reports are rarely obtained through independent observation of actual practice behavior, which may limit the strength of the conclusions that can be drawn. Second, available resources imposed limitations on the geographic area sampled, although we sought to sample pediatricians from both suburban and urban practice settings. Third, the limited return rate may have presented a potentially biased sample of respondents. We speculate that the low return rate of the surveys was a result of the extensive length of the questionnaire. Despite follow-up postcards and a second mailing, the response rate did not increase substantially. These limitations notwithstanding, the similarity with which practicing pediatricians approach children of similar age and developmental groups suggests that it is possible to identify the developmental aspects of the PI for purposes of medical education. Traditionally, the PI is taught by example, with a curriculum that can be characterized as informal and reliant on learning by trial and error, and skills are derived from exposure to a variety of of practice settings and patients. Our findings concerning common, age-appropriate techniques for conducting the PI support the notion that a developmentally organized curriculum would, to a large extent, be relevant across practice sites and geographic settings. This is especially important in the context of the current trend toward off-site, community-based training of students and residents. Whether a developmentally organized curriculum will be more efficient than the traditional approach in teaching PI skills to residents should be the focus of future research.

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### Figure 3. Mean age of patients when sexual issues were first discussed, urban vs suburban practice settings.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Urban</th>
<th>Suburban</th>
</tr>
</thead>
<tbody>
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<td>Sexually Transmitted</td>
<td>12.0</td>
<td>12.8</td>
</tr>
<tr>
<td>Diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV</td>
<td>12.6</td>
<td>12.9</td>
</tr>
<tr>
<td>and AIDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Immunodeficiency</td>
<td>12.8</td>
<td>13.4</td>
</tr>
<tr>
<td>Virus/Acquired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunodeficiency Syndrome</td>
<td>13.0</td>
<td>13.6</td>
</tr>
</tbody>
</table>

The results showed that many specific strategies are common in the PI and vary across age groups. For example, depending on the age of the child, pediatricians use different strategies for calming, establishing rapport, and obtaining information on medical history. As the child matures, verbal strategies are more often used for calming, establishing rapport, and obtaining information on medical history, and the quantity of medical history obtained from the child increases. Some differences attributable to the sex of the practitioner were noted in the use of specific nonverbal strategies. Issues pertaining to sexual activity and substance use are openly discussed during adolescence, although at a somewhat earlier age in urban populations and by female practitioners. Our previous research suggested that pediatricians include all children in the PI in developmentally appropriate ways. The findings of this study further substantiate and reflect the influence of the developmental stage of the child on the interview strategies used by the pediatrician.

### REFERENCES