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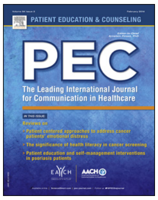

Communication study

Correlates of type and quantity of child communication during pediatric subspecialty encounters

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ABSTRACT

Objectives: Understanding the factors associated with child communication during subspecialty encounters may inform interventions promoting shared decision-making in chronic disease management. Objectives were to (1) describe the quantity and quality of child communication during outpatient subspecialty encounters and (2) determine if and how the quantity and quality of child communication vary by demographic and visit characteristics.

Methods: We videotaped subspecialty clinic encounters involving 20 health care providers and 155 children with one of the following conditions: acute lymphoblastic leukemia (consolidation/maintenance), persistent asthma, cystic fibrosis, type 1 diabetes, and obesity. The Roter interaction analysis system was used to code child utterances into one of 10 discrete categories.

Results: Children exhibited a mean of 15% of all utterances made during clinical encounters. Children spoke more during obesity encounters.

Conclusions: Similar to the findings of studies in primary care settings, children spoke infrequently during the subspecialty visits, and the most common utterances tended to be replies to questions from adults.

Practice implications: In this study, there was relatively higher engagement of children during obesity clinic encounters in the area of lifestyle choices. Strategies used to engage children in conversation in obesity clinics may be useful for engaging children in other subspecialty clinics.

1. Introduction

Communication during pediatric health care encounters, and its associations with care outcomes, have been studied extensively in primary care but much less so in subspecialty pediatrics [1–4]. Traditionally, the child's contribution during medical visits has been rather limited at an estimated 10% of the visit, and the communication is dominated by the physician and parent [5,6]. In a study of physician-parent-child communication in a pediatric emergency room, the number of statements made to a provider by the child was far fewer than those made by the parent. Children spoke in only 12% of the statements made to the provider, and the mean number of statements made by the parent was 156 statements versus 20 statements made by the child [5,7]. In their investigation examining parental regulation of child discourse in pediatric settings and using 32 transcripts from pediatric consultations, Aronsson and Rundstrom's study shows how the patients (children) are often excluded from direct interaction with the doctor [8].

Studies of primary care encounters have demonstrated that older children speak more than younger children, and children speak more with providers of the same gender [1,2,4,9–11]. While studies among adults suggest that patient-provider racial concordance is associated with higher satisfaction and partnership with physicians, patient-provider race/ethnicity concordance was not associated with more satisfied parent reports of primary care experiences for their children [12,13]. In a study examining child communication during asthma visits, only 13% of children asked one or more questions about asthma management [14].

In her study examining child communication contributions during non-subspecialty encounters, van Dulmen [2] showed that child contribution was limited to 4% of the visit. Studies looking at child preferences for physician communication during subspecialty visits using methods ranging from narratives [15] to vignettes [16] to online focus groups [17] showed that relationship building, demonstration of effort and competence, information exchange,

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availability, appropriate level of child and parent involvement, provider empathy, provision of medical information, and enabling of child participation in medical decisions were indicative of quality care.

Since youth with chronic medical conditions tend to have more frequent health care encounters than those without such conditions, interactions between health care providers (HCP) and youth with chronic conditions and their parents may differ in both quantity and type of utterances from those in primary care encounters.

To date, relatively few studies have explored child communication during subspecialty encounters [5,7,14,18,19,20]. Understanding the factors associated with child communication during subspecialty encounters that are focused on chronic disease management may help facilitate strategies that encourage child participation [18]. Because children with chronic medical illnesses have more frequent encounters and higher health care needs involving ongoing adherence, child participation is particularly suited for long-term decisions and multi-session interventions [21]. For example, pediatric patients treated for asthma have been shown to have higher treatment adherence when they participated more actively in health care encounters [19].

To understand the nature of child participation in chronic care management in pediatrics, we sought information about the factors associated with quantity and types of child communication during subspecialty encounters. We hypothesized that the following factors would be associated with more child utterances (and, therefore, greater opportunity for child engagement): (1) older child age, (2) child-provider gender concordance, (3) higher socioeconomic status, (4) child-provider race/ethnicity concordance, and (5) subspecialty visits that emphasized child-directed behavioral interventions.

2. Methods

This report used naturalistic observation to capture a cross-sectional analysis of baseline data collected from a longitudinal study of child communication during pediatric subspecialty care at one of five pediatric practices comprising a pediatric health care system in the Mid-Atlantic and Southeastern United States. Scientific merit and human research protections were reviewed and approved by institutional committees. Participants signed appropriate consent/assent forms before any research procedures. Eight trained research assistants (RAs) recruited participants and obtained informed consent/assent.

First, HCPs, including physicians, nurse practitioners, and physician assistants, from the five practices were invited to participate in the longitudinal study, which would involve digital audiovisual recording of their clinical encounters. Health care providers were included if they had primary responsibility of providing direct care to children in the practice and were not expecting to leave the practice during the next two years. An RA contacted each potentially eligible HCP about study participation by e-mail and then by phone. The HCPs were informed about the study individually or during division meetings to address questions and concerns and to obtain informed consent. Then, for each HCP, we recruited up to 15 child/parent dyads.

2.1. Child enrollment criteria

Children were included if they were receiving care for one of the following chronic conditions: acute lymphoblastic leukemia (at start of consolidation therapy or during first year of maintenance therapy), moderate or severe persistent asthma (based on spirometry, medication use, symptom report), cystic fibrosis, type 1 diabetes (diagnosed $\geq$ one year ago, HbA1c $\leq$ 11%), or obesity (body mass index $\geq$ 95th percentile for age and gender). Additional inclusion criteria were age 5–16.9 years, considered developmentally typical by the treating HCP, clinic visit with the enrolled HCP within the prior six months, and English-speaking.

2.2. Parent enrollment criteria

Criteria for parent enrollment included legal guardianship, with parent/legal guardian having at least weekly involvement in the child's medical care (e.g., administering medications, monitoring symptoms, making/keeping appointments, phone contacts with clinic, etc.), self-reported and demonstrated ability to speak and read English, plans to continue to participate in the child's care, and plans to continue to attend the clinic of enrollment for at least six months.

2.3. Enrollment process

With input from enrolled HCPs and their clinic staff, RAs reviewed clinic schedules to identify potentially eligible patients. The RA contacted parents/caregivers by mail and then telephone.

2.4. Main dependent variables: quantity and type of child utterances

We used the Roter interaction analysis system (RIAS) [22] to code child utterances (Appendix A). Just before the visit, the RA placed a Sony Handycam HDR-XR150 digital camcorder (Sony Corporation, Tokyo, Japan) equipped with a Raynox HD-5050PRO-LE wide angle conversion lens (Yoshida Industry Co., Ltd., Tokyo, Japan) in the examination room in a position that maximized capture of the visit interactions. The camera was started just before the HCP first entered the room and stopped when the HCP left the room at the end of the visit. The digital audio–visual recording was downloaded to a secure server. Trained RAs reviewed each recording and coded the total number of child utterances; each individual utterance was coded into one of 10 discrete categories (question asking-biomedical, question asking-lifestyle/psychosocial, information giving-biomedical, information giving-lifestyle/psychosocial, patient activation & engagement, rapport building-positive, rapport building-emotional, rapport building-negative, rapport building-social, and procedural).

2.5. Measured covariates

Child participation in pediatric medical encounters has been shown to vary according to demographics [1,2,4,9–13,23–25]. Thus, demographic data, including child age, child gender, child race and ethnicity, parent age, parent's Hollingshead socioeconomic status score, parent's education level, household income level, number of children in the home, number of adults in the home, primary language spoken at home, were collected by parent interview. Visit data, including the type of subspecialty visit (cystic fibrosis, asthma, diabetes, obesity, or cancer) and person present during the visit (mother, father, grandparents, siblings, other), were recorded by the RA. Self-reported data from an HCP demographic survey were matched to child demographic data to create variables for HCP-child gender concordance and race/ethnicity concordance.

2.6. Statistical analyses

Data were screened for missing values, and model assumptions were checked before statistical analyses. The statistical software STATA, version 12.0 (StataCorp LP, College Station, TX), was used for all analyses. Detailed descriptive statistics were computed for all study variables. Race and ethnicity data were combined into one