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Shared decision-making in pediatric otolaryngology: Parent, physician and observational perspectives☆

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ABSTRACT

Objective: To describe physician and parent behavior during pediatric otolaryngology surgical consultations, and to assess whether perceptions of shared decision-making and observed behavior are related.
Methods: Parents of 126 children less than 6-years of age who underwent consultation for adenotonsillectomy or tympanostomy tube insertion were prospectively enrolled. Parents completed the Shared Decision-Making Questionnaire-Patient version (SDM-Q-9), while surgeons completed the Shared Decision-Making Questionnaire-Physician version (SDM-Q-Doc) after the consultation. Visits were video-recorded and analyzed using the Roter Interaction Analysis System to quantify physician and parent involvement during the consultation.
Results: Perceptions of shared decision-making between parents (SDM-Q-9) and physicians (SDM-Q-Doc) were significantly positively correlated ($p = 0.03$). However, there was no correlation between parents' perceptions of shared decision-making and observations of physician and parent behavior/involvement (proportion of physician socioemotional talk, task-focused talk, or proportion of parent talk). Surgeons' perceptions of shared decision-making were correlated with physician task-focused talk and proportion of parent talk.
Conclusions: Parents and physicians had similar perceptions of the degree of shared decision-making to be taking place during pediatric otolaryngology consultations. However, there was variability in the degree to which parents participated, and parent perceptions of shared decision-making were not correlated with actual observed involvement.

1. Introduction

Informed consent is a critical component of patient-centered care, which refers not only to understanding the risks and benefits of a treatment course, but also of alternative treatments [1]. Particularly in elective situations, patients may have difficulty deciding on a treatment course when multiple reasonable options exist [2]. In pediatrics, parents tend to make proxy decisions for their children, which can compound this difficulty [3,4]. The few pediatric studies to date have suggested that some parents do struggle with medical decisions for their children [5–7].

Shared decision-making describes an approach where patients and healthcare providers collaborate to formulate a treatment decision that is based on the most up-to-date evidence, while at the same time considering the patient values and preferences [8,9]. Previous research suggests that parents may not be as involved in decision-making for their children as they would prefer, and there appears to be a discrepancy in the way parents and physicians perceive their level of involvement in the medical decision-making process [7,10,11].

Shared decision-making has also earned the attention of law makers in the United States [12]. More specifically, Section 3506 of the Patient Protection and Affordable Care Act promotes the use of

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shared decision-making in healthcare. The emphasis is to improve health outcomes and reduce unnecessary variation in care and costs across different healthcare regions through the use of shared decision-making. Although the Patient Protection and Affordable Care Act was enacted in 2010, little research has been conducted to understand the state of shared decision-making in otolaryngology [13].

The objectives of this study were to describe physician and parent behavior during pediatric otolaryngology surgical consultation and to assess whether perceptions of shared decision-making are related to observed behavior.

2. Methods

2.1. Participants

One hundred and thirty-one caregivers of children presenting to the pediatric otolaryngology clinic at the IWK Health Center, a tertiary healthcare center in eastern Canada, were prospectively enrolled. The children were new patients presenting with one of four conditions: chronic/recurrent tonsillitis (considering tonsillectomy); sleep disordered breathing (considering tonsillectomy and/or adenoidectomy); chronic/recurrent acute otitis media (considering tympanostomy tube insertion); chronic/recurrent sinusitis/nasal obstruction (considering adenoidectomy).

Exclusion criteria for parents included not having the decision making authority (i.e. not the legal custodian of the child) or not being fluent in English. If both parents were present, only one parent was included. If both parents consented to participate, the data from the mother was analyzed as mothers participated most often and past research has focused on the experience of the mother [6].

For providers, three fellowship trained pediatric otolaryngologists participated.

2.2. Procedure

Research Ethics Board approval was obtained. Parents were informed of the study by a clinic nurse prior to seeing the surgeon. If interested, research assistant provided further details and obtained informed consent. The questionnaires (see below) were then administered in a dedicated research room and the otolaryngologists completed their questionnaire after the consultation visit. All consultation visits were video-recorded using dual wall mounted cameras in the consultation room (one camera captured a full room view and another captured the health care providers' face).

2.3. Measures

2.3.1. Demographic form

This form was used to collect baseline demographic information, and whether the family had any previous surgical experience.

2.3.2. Shared decision-making questionnaire-patient version (SDM-Q-9)

This 9-item questionnaire assessed perceptions of patients' (in this case, parents') involvement in the surgical decision-making process (Appendix) [14]. Each question is rated on a Likert scale from completely disagree to completely agree. The questionnaire yields scores that range from 0 (no shared decision-making) to 100 (extremely high level of shared decision-making). The scale has shown face validity and one-dimensional structure, along with high reliability [14]. In the current study, the Cronbach's alpha was 0.91, indicating excellent scale reliability [15].

2.3.3. Shared decision-making questionnaire-physician version (SDM-Q-Doc)

This 9-item questionnaire assessed perceptions of surgeons' involvement in the surgical decision-making process (Appendix) [16]. The SDM-Q-Doc is similar to SDM-Q-9 but with altered wording such that it is appropriate for the physician involved in the interaction. The scale has shown high reliability and factor analysis confirmed a one-dimensional structure in various medical settings. In the current study, the Cronbach's alpha was 0.89, indicating good scale reliability [15].

2.3.4. Roter interaction analysis system (RIAS)

This observational behavior coding system is used to quantify interactions between healthcare providers and patients during medical and surgical consultations [17]. The RIAS is comprised of 41 mutually exclusive and exhaustive codes that are combined into subscales representing task focused talk (e.g. gives medical information, asks for opinion) and socioemotional talk (e.g. gives complement, empathy statement). Although typically reported at the subscale level, there are specific RIAS codes that are relevant to shared decision-making. These codes include partnership statements (statements conveying physician alliance and support of patient in decision-making; e.g. “Let's figure this out together”), asks for understanding statements (statements for checking in on whether information was understood; e.g. “Are you clear on this?”), asks for opinion statements (asks for the patient's point of view or perspective; e.g. “What do you think?”), and asks for permission statements (asking for permission to give information or proceed; e.g. “Would it be ok if I made a suggestion?”).

The RIAS coding was facilitated using Observer XT software (Noldus, Wageningen, the Netherlands) and was accomplished by a primary coder watching video-recordings of consultation visits. Following procedures outlined by Roter [17], the primary coder assigned a relevant code to each utterance of speech by the provider and parent. An utterance was defined as the smallest unit of speech that conveys meaning. Because the coding scheme is mutually exclusive and exhaustive, each utterance is assigned one code, and only one code could be assigned to each utterance. To assess for the reliability of coding, a second research assistant coded 20% of the available videos [18]. Inter-rater reliability was assessed using Pearson correlations as recommended by Roter, but also with a more conservative estimate using intra-class correlations (ICC) to correct for dependency in data. Reliability values were as follows: physician to parent task-oriented talk, 0.936 (standard error (SE) = 0.008); physician to parent socioemotional talk, 0.674 (SE = 0.061); physician to parent total talk, 0.931 (SE = 0.008); and parent to physician talk, 0.932 (SE = 0.011).

2.4. Data analysis

All analyses were conducted using SPSS Version 17 (IBM Corp., Armonk, N.Y.). The SDM-Q-9 and SDM-Q-Doc scores were not normally distributed; therefore, non-parametric tests were used. Descriptive statistics including median, interquartile range (IQR), and SE are reported. Mann Whitney U tests were used to examine SDM-Q-9 scores by surgery type (tympanostomy tube insertion/adenotonsillectomy), previous surgery for the index child (yes/no) or any child in the family (yes/no), and which surgeon met with the family. A single measure, 2-way consistency ICC was used to examine the relation between the SDM-Q-9 and SDM-Q-Doc.

For video analysis using the RIAS, the proportion of surgeon socioemotional and task focused talks were calculated by dividing the number of utterances for each subscale by the total number of physician utterances. The proportion of parent talk during the consultation was calculated by dividing the number of parent