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Shared and individual medical appointments for children and adolescents with type 1 diabetes; differences in topics discussed?

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ABSTRACT

Objective: The purpose of this study was to examine differences in the type of topics discussed during shared medical appointments (SMAs) and traditional individual outpatient visits for children and adolescents with type 1 diabetes. In addition, differences between the conversational contributions of the participants were examined.

Methods: Videotapes of 42 individual outpatient visits and 5 SMAs with 31 children or adolescents were collected and observed using a checklist of topics adapted from the international consensus guideline for the management of type 1 diabetes in childhood and adolescents. Furthermore, patients reported about their experience with the information and support provided during an SMA. Data analysis was performed using one-way ANOVAs and univariate variance analysis.

Results: In SMAs, more diabetes-related topics were discussed. During SMAs, the conversational contributions of the different participants seemed to be more equally distributed than during traditional individual outpatient visits. Participants felt that they had learned most from the presence of other patients and their questions.

Conclusion: More diabetes-related topics are covered in SMAs than in individual outpatient pediatric follow-up visits.

Practice implication: SMAs seem to offer an appreciated variation on the regular diabetes care for children and adolescents.

1. Introduction

Shared medical appointments (SMA) or group visits have emerged in the United States since 1996 and were later introduced in the Netherlands. During an SMA between five to eight, mostly chronically ill patients attend their physician simultaneously to discuss health care issues during a 90 min visit. The physician approaches the patients one-by-one in the presence of the rest of the group, thereby providing the same care as during a traditional individual appointment. The physician is assisted by a professional group leader and a medical assistant or nurse practitioner. The composition of this multidisciplinary care team depends on the type of illness the patients have [1]. The group setting is expected to stimulate active interaction by asking questions and allowing for interruptions to take place. It is the role of the group leader to explain the procedure of the SMA, stress confidentiality, invite participants to respond, and let everybody speak and have their turn. The medical assistant or nurse practitioner is present to measure weight, height and glycosylated hemoglobin (HbA1c) levels, and to register relevant symptoms and make follow-up appointments.

The SMA concept was originally developed by Noffsinger [2,3] as a way to improve both access and quality of care through enhanced patient education and support. A recent review on the added value of group visits indicates that there is evidence to support the effectiveness of group visits in improving patient and physician satisfaction, quality of care and quality of life, and in decreasing emergency department and specialist visits [4]. Group visits seem particularly suited for chronic illness management in allowing more time for self-management education, skill-building, and doctor–patient interaction, thereby reinforcing patient's self-efficacy [4]. In addition, in group visits the key information is expected to be delivered more effectively because the lengthy visits allow for more thorough discussions about health issues [5]. Most of the eighteen studies included in the review on SMAs focused on adult patients only [4]. Apart from one recent evaluation study in type 1 diabetes [6], hardly any research has been done on chronically ill children for whom an SMA might be an

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appreciated variation of the traditional care with rather standard three monthly outpatient follow-up visits. Besides, physicians and other health care providers are likely to appreciate such a patient visit as well because it can bring about variation in routine work and an opportunity to work with colleagues in a different way [7]. The room for peer-to-peer support during an SMA may also be an advantage, especially for adolescents who tend to listen more to patients with the same age and problems than to their parents or health care provider [8].

The present study examines the topics that emerged spontaneously from the discussions during SMAs for children or adolescents with type 1. As these patients have to deal with their disease for the rest of their lives and their health condition largely depends on proper self-management, they need to learn to cope with the diabetes in a responsible way [9,10]. This is, however, no easy task, because especially in puberty the high burden of the disease produces a lot of resistance and treatment nonadherence and, consequently, badly controlled diabetes [11]. Besides, during regular follow-up visits, young patients often behave in a passive way to back out of their responsibility to take care of their disease [12]. Every new intervention method, such as an SMA, which could be helpful in enhancing their health behavior and coping skills, should therefore be explored on its potential benefits. As an SMA lasts longer than an individual appointment and mutual interaction is actively sought, SMAs may provide more opportunity to discuss relevant diabetes-related topics and to invite patients to raise current health issues themselves. In this way, SMA patients learn from each other and pick up information about topics they were afraid to ask or never thought of asking. We therefore expect that the children and the adolescents feel more at ease and more stimulated to contribute to the conversation when they hear their fellow patients talking about a certain topic.

The purpose of this study is to examine the differences between SMAs and traditional individual outpatient visits on each individual's level of participation as well as in the number of topics discussed. The focus is thereby specifically on the topics that, according to the Dutch guideline on type 1 diabetes in children and adolescents [13], need to be attended to during every follow-up visit. In addition, the perceived social and informational value of an SMA will be assessed. Our expectation is that more different topics are discussed during an SMA than during an individual follow-up visit and the young patients participate more actively because an SMA lasts longer and different patients bring up different health care needs.

The following research questions will be addressed:

1. What are the differences between a traditional individual outpatient visit and an SMA for children and adolescents with type 1 diabetes in:
   a. the amount of diabetes-related topics discussed?
   b. the conversational contributions of the participants?
2. How do children and adolescents assess the social and informational aspects of an SMA?

2. Methods

2.1. Design

In 2008, a project was started titled 'Together to the physician' with fourteen medical teams from different hospital departments and one primary care centre [14]. Every team participated in the training provided by the Dutch Institute for Healthcare Improvement (CBO) directed at applying SMAs in their specific clinical setting. Five pediatric teams focused on children and adolescents with type 1 diabetes. In the participating hospitals, one routine three monthly follow-up visit was replaced by an SMA. The SMAs of the diabetes groups were more thoroughly examined for the purpose of the present study. Each of the five teams with a total of 31 children conducted an SMA which was videotaped. For this purpose, one unmanned videocamera was used and directed mainly at the medical team. In addition, series of individual outpatient visits with children and adolescents with type 1 diabetes of the same physicians were also videotaped, resulting in a set of 42 videorecorded individual visits to be used as comparitive data. The study was carried out according to Dutch privacy legislation. The privacy regulation was approved by the Dutch Data Protection Authority. According to Dutch legislation, approval by a medical ethics committee was not required for this observational study. Patients or parents (for the younger patients) filled in an informed consent form before the recording of the consultation. They could withdraw their consent at any time; no one did.

Apart from the physician, one other team member was present in 18 of the 42 individual visits, mostly a diabetes nurse. In the individual appointments there was never more than one additional team member present, while the SMAs were attended by a total of 3–6 team members, such as, pediatricians, diabetes nurses, dieticians, psychologists or social workers. Participating patients were between 6 years and 19 years of age and participated in different age groups, of 6–12 (children) and 13–19 years (adolescents). None of the children or adolescents had had an SMA before. Parents were welcome to accompany their children to the SMA. The agenda of an SMA was not decided beforehand. The group leader was instructed to highlight shared topics that arise when individual patients were approached by the physician one by one.

2.2. Topics

For answering our first question on whether or not SMAs give the opportunity to discuss more diabetes-related topics than individual appointments, a list of topics was used deduced from the guideline of the Dutch Diabetes Federation [13]. This guideline describes diabetes-related topics that have to be discussed during every follow-up visit of children or adolescents with type 1 diabetes. The guideline was developed according to the international ISPAD Consensus Guidelines for the Management of Insulin-Dependent, type 1, Diabetes (IDDM) in Childhood and Adolescence, published in 1995 [13]. The 24 topics used in this study are listed in Table 2. The topic 'well-being' included both physical and psychological well-being. 'Intercurrent disease' and 'Intercurrent problems' included non-diabetes-related health problems. The topic 'self-control' included the discussion of the method of measuring blood glucose levels, its current results and the frequency of measuring. 'Insulin dose' referred to information about how much insulin the patient uses, the frequency of injecting insulin and possible changes in insulin doses. The discussion of the different methods by which insulin can be used, i.e. injection or pump, was captured under the heading of 'insulin method'. 'Injection sites' included skin lesions caused by injecting insulin or performing self-controls. The topic 'development' included physical development, i.e. changes during puberty, as well as emotional development, i.e. self-esteem, fears, shame, self-knowledge and fear of failure. 'Leisure time' included issues such as holiday and hobbies. This could be discussed in the context of diabetes, e.g. "how to cope with diabetes during holidays? or in general, e.g. "what hobbies do you have?".

2.3. Observations

For each topic in the guideline it was scored whether or not the topic was discussed. For the individual visits the topics were scored for each patient individually. For the SMAs one form was used for