Development of "VIG-Diabetes", a video intervention to optimise self-management in young people with type 1 diabetes

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Article points

1. Poor communication between healthcare professionals (HCPs) and young people with diabetes results in suboptimal diabetes management and outcomes.
2. The authors sought to evaluate the feasibility of using video interaction guidance (VIG), an evidence-based intervention to improve communication skills, in children and young people with type 1 diabetes.
3. VIG was feasible and improved interaction with HCPs and engagement with diabetes services in the participants.

Key words

- Type 1 diabetes
- Video interaction guidance

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In the past few years, an emphasis has been placed on effective communication between healthcare professionals (HCPs) and young people in order to support the self-management of diabetes. Efforts have been made to ensure that HCPs are well trained in communication techniques, such as motivational interviewing, as a means to address the concern that poor communication contributes to reduced engagement with care and suboptimal diabetes control in young people. However, over the long term, such interventions have not been successful. In this article, we propose that this is because the two-way nature of communication is not being addressed. Young people are not being offered training in communication themselves, which results in both parties struggling to achieve the desired outcome from each interaction. The diabetes team at Tayside Children's Hospital has developed a video-based intervention for use in the diabetes clinic that offers training in communication skills to young people with diabetes and their HCPs, with a view to enhancing engagement with care and self-management of diabetes.

Glycaemic outcomes in young people with type 1 diabetes remain poor across the UK despite the increasing use of intensive insulin regimens for management of the condition (Scottish Study Group for the Care of the Young with Diabetes [SSGCYD], 2006; Health and Social Care Information Centre, 2014). This has generated interest in the way in which healthcare professionals (HCPs) communicate with young people with diabetes, in the hope that this will lead to an improvement in their psychosocial wellbeing. It is well known that psychological wellbeing contributes to an individual's ability to self-manage their diabetes, which, ultimately, improves glycaemic control. This is important as diabetes is a self-managed condition that requires substantial motivation to adhere to the therapy recommended by HCPs.

Despite the advent of modern technologies such as pump therapy, compared with the more routine non-engagement in this age group, additional in-clinic contact with staff and educational programmes to improve engagement between young people and their HCPs has a limited effect on clinical outcomes and associated long-term complications, leading to poor health (Diabetes Control and Complications Trial Research Group, 1993; SSGCYD, 2006). Furthermore, young people's needs for managing diabetes are poorly understood (Greene et al, 2004; Skinner and Cameron, 2010). This is despite health improvement initiatives to train HCPs in

communication with people with diabetes, facilitating self-efficacy and enthusiasm for change, and safeguarding the delivery of high-quality services (Department of Health, 2007; World Health Organization [WHO], 2009). While training courses in communication and motivational interviewing are available, these are aimed at HCPs only, not their young patients, despite the fact that diabetes is a self-managed condition and despite evidence that young people view effective communication and the matching of health goals as a key component of achieving glycaemic control (Greene et al, 2004; Skinner and Cameron, 2010). In addition, many young people report poor communication with their HCPs and feel that their needs for managing diabetes are poorly understood (Greene et al, 2004). This suggests that a new approach is needed to improve communication between young people and HCPs and to improve engagement among young people.

There is evidence that successful communication is a reciprocal and two-way process that relies on partners working together in an attuned way to ensure that the meaning within their conversation is received and understood (WHO, 2009). Two-way communication, therefore, underpins not only clinical outcomes but also effective and safe care. This suggests that people with diabetes should be entitled to receive training in communication skills, such as giving and seeking information, opinions and advice, in order to maximise the effectiveness of the consultation process.

It could be argued that not offering this training to people with diabetes creates an inequality in the consultation setting. This is pertinent for young people, who sometimes find it difficult to effectively express their needs for diabetes management.

Project hypothesis

The central hypothesis of the current project, therefore, is based on our observations that in order to enhance self-management of a long-term condition, such as diabetes, strength-based communication skills training needs to be directed at both the young person with diabetes and the HCP.

Video interaction guidance

Video interaction guidance (VIG) is an evidence-based intervention that uses communication skills and video to help patients improve their interactions with others and to bring about positive change in their important relationships.

The method, quality and standards are specified by the Association for Video Interaction Guidance UK (AVIGuk; available at: http://videointeractionguidance.net), and courses have been developed in Dundee for HCPs. The following topics are covered:

- "Turning difficult conversations into learning conversations" – for patients, carers and interdisciplinary teams. This course covers giving bad news, complaints and professional disharmony.
- "Ensuring informed consent" – this includes the ethical recruitment of study volunteers and how to obtain their informed consent to participate.
- Supporting constructive and standardised feedback in clinical appraisals. This course is for students and staff.
- Enhanced communication skills training for patients and HCPs. This course is designed to support empowered relationships, psychosocial wellbeing and clinical outcomes.

The VIG method is a strengths-based approach in which a video of an activity, such as an outpatient consultation, is analysed and re-watched to demonstrate the principles of attuned interaction. The focus is on what the patient and/or the professional is doing well. This helps them to recognise their emergent strengths and build on them, and to understand the impact on the other person when they are communicating effectively. The approach works through goal-oriented, learner-led target setting and review.

The VIG method is underpinned by theoretical roots in intersubjectivity, social constructivism and pedagogy theories, and it works in a respectful and collaborative way with clients. It empowers by using positive

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1. Although successful communication is recognised to be a two-way process, interventions to improve communication generally focus only on the healthcare provider, not the patient.
2. Video interaction guidance (VIG) is an evidence-based intervention that improves the client's communication by using video clips to highlight when and how the client and/or practitioner interact effectively.
3. The authors sought to adapt VIG for use in young people with type 1 diabetes in order to improve engagement with care, self-management and diabetes control.

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1. Six young people with type 1 diabetes participated in VIG during a routine appointment. The aim was to help the participants identify when they were communicating well and how these skills could be used to express their attitudes, wishes and needs to the clinician.
2. The VIG sessions could be completed in 30 minutes and were acceptable to the patients, their families and the clinicians.

video clips as the basis of a reflective dialogue about how to improve the interaction. It is a relationship-based intervention, which helps clients and HCPs become more sensitive and attuned to the other's emotional needs, which, in turn, helps them to meet theirs (Kennedy et al, 2011).

The diabetes pilot study

A feasibility study was performed to explore VIG intervention in the paediatric clinic and to develop it to teach communication skills to young people with type 1 diabetes in order to improve engagement with care, self-management and diabetes control.

Before reaching the development stage of the pilot project, the paediatric diabetes team at Tayside Children's Hospital, Dundee, all agreed on the potential of delivering an intervention for young people struggling to manage their diabetes. Members of the team were aware that VIG was widely used within social care, education, the police force and, more recently, the NHS (NICE, 2012). It was felt that the opportunity to adapt it for the diabetes outpatient clinic, with the potential to work with young people on enhancing their communication skills and, in particular, the things that they were already doing well, would lead to long-term improvements in these individuals' psychosocial wellbeing and clinical outcomes.

A 2-day VIG introductory course was undertaken by the paediatric specialty registrar, which allowed her to begin as a trainee VIG guider with the accrediting body, AVIGuk. There were several steps in adapting the general VIG method to a "VIG-Diabetes" intervention in the busy diabetes outpatient clinic.

Ethical considerations in the planning of this project included consent and, in this particular case, appropriate usage and storage of the video material. Discussions with the Caldicott Guardians took place and approval was applied for and granted. The video material was stored in a locked file within hospital premises and destroyed at the end of the project.

During the technological development phase, various devices were tested for the purpose of recording consultations. An iPad (Apple, Cupertino, CA, USA) was used along with iMovie, a video editing app, which allowed videos of consultations to be edited quickly. A specially adapted stand was made by the IT department to hold the iPad, which allowed non-intrusive filming to take place within the available clinic space.

Participants

The target population comprised young people with type 1 diabetes aged 13–18 years who lived within a particular geographical location and had an HbA_{1c} level of >80 mmol/mol (9.5%) and a diabetes duration of >1 year. The project was non-randomised. Participants were identified using the Scottish Care Information Diabetes Collaboration audit tool.

Information leaflets for both young people with diabetes and their parents were developed, along with consent forms, prior to recruitment. Young people with diabetes were supplied with the information leaflets and then invited to take part.

Many of this group had poor attendance at the clinic and, despite initially showing interest in the project, were either reluctant to commit or difficult to reach. Some expressed reservations regarding the video element. Some were very interested in taking part, however, and six participants were recruited from a group of 21 eligible young people.

The VIG-Diabetes process in the clinic

In VIG, participants are video-recorded in a normal situation in which they wish to change their behaviour. For the purposes of VIG-Diabetes, this was carried out within the paediatric diabetes outpatient clinic during a routine appointment.

The video was edited by the VIG Guider, who selected three very short clips, with a maximum duration of around 1 minute. These video clips showed positive moments when the young person was communicating well with the HCP – in other words, displaying the VIG "principles of attuned interaction." Clips

of these attuned moments were edited by the VIG Guider while the participant used the time to consult with another member of the diabetes team or waited for 5 minutes in the waiting area before being called back into the consultation room to reflect on the edited clips.

Each participant had the opportunity to review the three clips. Reflection on the edited clips involved a discussion between the participant and HCP around why the VIG Guider had chosen these positive moments and, once the participant was adept at identifying any positive moments themselves, how these behaviours might be repeated in other parts of the consultation with the HCP.

The aim here was to help the participants identify when they were communicating well and how these skills could be used to express their attitudes, wishes and needs to HCPs (Greene, 2009). This process of self-reflection was repeated three or four times at weekly to monthly intervals, by which time the behaviour change was expected to have occurred.

Results

It was feasible to adapt VIG as an intervention for use in the paediatric diabetes clinic. The technology available worked appropriately and allowed straightforward viewing and editing of the desired video clips.

It was possible to complete a VIG session within 30 minutes, which, in our view, is an acceptable duration of clinic appointment for a young person with poor glycaemic control and difficulty in self-managing. VIG was acceptable to the participants, their families and clinic staff.

Four of the six young people taking part in the project completed all three sessions. The fifth requested that her final session be postponed until after her exams were complete. The sixth completed her first session as an inpatient and struggled to attend clinic appointments thereafter.

Participants' perspectives

Before beginning the VIG sessions, the participants set goals, such as improving confidence in discussing their diabetes with HCPs and their families. After completing the VIG intervention, the participants said they felt more able to talk openly to HCPs about their diabetes. For example, they all made difficult disclosures throughout their reflective sessions with the paediatric registrar. These included:

- Their experiences of having had diabetic ketoacidosis (DKA).
- Their understanding of their own behaviour and that of their family in relation to having diabetes.
- Their knowledge gaps in managing their diabetes.
- Their experiences of talking with their HCP and their preferred sources of support.

Providing the participants with the opportunity to openly express or even confess their difficulties with diabetes allowed the paediatric registrar to address their concerns, as the following quote from one young woman illustrates:

"I don't know how to work out my insulin."

Among the young people who completed all three sessions, feedback on the project was positive.

HCPs' perspectives

The staff felt that some of the participants appeared to have an improvement in their communication skills, and most noticed increased activity in making initiatives with HCPs. For example, shortly after her first VIG session, one of the young people who had been particularly difficult to engage with took the initiative to contact the team's dietitian to request consideration for pump therapy. In addition, the diabetes team fed back that one of the participants was "a new young lady."

Further evaluation will take place with participant interviews, followed by qualitative analysis.

Plans for further development of VIG-Diabetes

Following the feasibility study and successful implementation of VIG-Diabetes in a paediatric diabetes outpatient clinic, we suggest that further research should be undertaken to

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1. After completing VIG, the young people with diabetes felt able to talk more openly to their clinicians and made difficult discosures about living with their condition.
2. Healthcare providers reported increased engagement from the participants.
3. VIG-Diabetes is a feasible intervention within the existing clinic, is acceptable to young people and clinic staff, and does not interfere with routine care; it should, therefore, be evaluated further in randomised controlled trials.

"It is anticipated that enhancing the communication skills of young people, so that they can express their experiences effectively to HCPs, will promote services that are more in tune with their young patients' specific needs for managing diabetes in their everyday lives."

compare standard diabetes services with the VIG-Diabetes method as a way of achieving positive change and wellbeing for both partners in the consultation relationship.

The primary outcome of the study would be glycaemic control within 1 month of VIG initiation, and at 1 month and 6 months after the final (third) session. Secondary outcome measures would include health service utilisation and clinic attendance, hospital admissions, rates of DKA and hypoglycaemia, wellbeing and self-management behaviours.

The design of an evidence-based, integrated package for use within the NHS would follow directly on from the study, with uptake likely to be high in centres wishing to improve young people's management of diabetes.

It is anticipated that enhancing the communication skills of young people, so that they can express their experiences effectively to HCPs, will promote services that are more in tune with their young patients' specific needs for managing diabetes in their everyday lives. Furthermore, it is hoped that further study will show that it will be feasible to deliver VIG-Diabetes through standard NHS services and assess its impact on health service resource use.

Potential impact on children and young people with diabetes

The primary focus of VIG is to facilitate shared responsibility within the patient–HCP relationship, thereby empowering young people with diabetes to express their ideas, views and needs when it comes to their own self-management.

We believe that, by providing this training, young people will be better equipped to address difficulties they may be having and also to translate these skills into the wider setting, such as relationships with parents and family, school and employers.

We expect that this would ultimately result in better engagement with care and an improvement in glycaemic control, leading to fewer diabetes-related complications overall and, importantly, an improvement in the psychosocial wellbeing of children and young people with diabetes. ■

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