Identifying Primary Functions, Goals and Objectives of a Virtual Multi-Disciplinary Advisory Team for Teenagers and Young Adults with Cancer: A Delphi Study

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Abstract

The Improving Outcomes Guidance for Teenagers and Young Adults (TYA) with cancer (1) recommends improved access to specialist TYA services. Due to the large area covered by TYA Services in the South West, innovative approaches such as virtual multi-disciplinary teams (MDT) have been developed to achieve IOG standards. However, there is little evidence to help inform in the development of virtual teams. Using a Delphi technique (N = 8), our study set out to identify functions, goals and objectives of a TYA-specific virtual MDT. Findings suggest that they have the potential to adopt a multifaceted role in addressing the clinical needs of patients; developing skills and the knowledge bases of clinicians; and providing a forum that systematically meets the requirement of formal procedures. These findings provide a valuable resource to underpin development of similar teams where there is limited evidence to support this innovative process.

Introduction

In August 2005, NICE published guidance on Improving Outcomes for Children and Young People with Cancer, known as "Improving Outcomes Guidance" [1]. The IOG set out recommendations on how healthcare services for children and young people with cancer should be organised, focussing on the importance of ensuring that the holistic needs of teenagers and young adults (TYA) are met. The key messages of the document indicate that healthcare for this specific population should be inclusive, address their psychological and social needs, recognise the impact of a cancer diagnosis at a crucial stage of development, and be delivered in an accessible way. The document indicates that patients should be discussed at both site-specific MDT meetings and specialist TYA services, adopting a shared-care model of healthcare delivery. Whilst the document outlines potential care pathways and core principles, the operational needs of running a TYA service that can meet all of the IOG standards has fallen to service leads in cancer care.

A core component of guidelines in all of cancer care service is MDT working [2]. However, there are substantial time and resource constraints for a large number of professionals to attend additional meetings required in MDT cancer care [3]. This may be particularly so for the TYA clinical population as both paediatric and adult specialist services input may be necessary in the diagnostic and treatment process. Highly specialised MDT meetings pose a particular difficulty for rural and remote areas or when specialist centres are regional, which may compromise the equality of access and fail to satisfy the guidelines. A major challenge in oncology services is to deliver optimal therapy, when patients often do not live in close proximity to specialist services making it difficult for TYA services to meet IOG guidance [4]. For these reasons, a need has arisen to adopt and develop more innovative approaches, e.g. telemedicine.

Telemedicine emerged in the 1960s, with a steady proliferation of telemedicine and teleconferencing in the delivery of healthcare in the interim. The success of this approach may be attributed to the pivotal role telemedicine has in balancing resources and clinical demands, which is particularly pertinent in delivering healthcare to the TYA clinical population that requires specialist input including oncology, paediatrics, palliative care, nursing, psychology and social work.

However, communicating through technology is likely to produce social barriers, such as the absence of social cues that may hamper the development of a functioning team, [5] particularly when the technology is perceived to make interactions seem 'impersonal' [6]. Due to the reduction of social cues, relationships take longer to form which may directly influence the functioning of the group. Warkentin [7] observed that although previous studies found that virtual teams exchange information less effectively than at face-to-face meetings, this may also reflect how the team has developed as a whole. Once relationships within a team have formed and the team has adapted to the technology, telemedicine may be as effective as face-to-face interactions. Furthermore, it is possible that 'virtual' team work is adversely affected by the interruption of the flow of reciprocal communication due to members having different competency levels using the technology, or simply different speeds of typing or reading [4].

To achieve successful team working, clear shared goals and understanding of roles are imperative [8]. Furthermore, a consistent finding is that good team working is associated with better delivery of services in different work environments [9,10]. Evidence suggests that effective team working needs an established shared team culture, open communication and mutual respect, all of which may be negatively influenced by remote working, social barriers, and technological delays and issues [9,10].

Potential drawbacks in using telemedicine have been identified, despite the distinct advantages in using this medium in both achieving IOG standards and adequately meeting the needs of geographically dispersed specialist population such as TYA. It is important to address these potential difficulties to optimise the use of technological advances. Virtual multidisciplinary teamwork provides an innovative and pragmatic solution to the geographical and logistical difficulties presented in the delivery of healthcare to teenagers and young adults with cancer. Virtual MDTs may be well positioned to offer optimum equitable healthcare to those who are not in close proximity to specialised care. It may also offer accessibility to a range of specialists due to the patient's complexity of needs (e.g. TYA with cancer). However, the success in its solution will be dependent on the operational skills of the team hosting the technology.

Aims of the study

The purpose of this study was to establish the primary functions, goals and objectives of an established virtual TYA Multi-Disciplinary advisory Team (MDaT) through the use of the Delphi technique. The data generated could be used to underpin the development of future virtual or traditional MDTs delivering healthcare for teenagers and young adults with cancer, promoting improved team working, and thus benefitting patient care.

Context: the South West Region TYA MDaT

The TYA MDaT is a secondary approach to determine the unique needs of individual patients. This is a group of clinicians from a range of healthcare disciplines who come to together to discuss a patient between the ages of 16-24 with cancer.

The TYA MDaT team consists of the following professionals: lead TYA nurse; consultant clinical psychologist; social worker; clinical oncologist (TYA lead clinician); paediatric oncologist. These core professions are expected to attend all TYA MDaT meetings, and nominated palliative care and haematology consultants also regularly attend.

Clinicians make their contributions remotely at a specific time-slot using a virtual platform/meeting, so that it is not necessary for referrers or the TYA MDaT to be physically present in the same room for the meeting, facilitating optimum geographical patient treatment and support.

This pilot service innovation is possible through the introduction of an IT platform introduced by a private organisation, ISEEU™ Global Limited. ISEEU is an IT organisation that delivers information security software and expertise to the healthcare sector. Their technology platform supports innovative ways of collaborative, remote working, and adheres to compliance by minimising the data loss risk of sharing valuable confidential data.

Methodology

Delphi methodology is used to obtain relevant and intuitive insight of a panel of experts (in this case of the TYA team) in an anonymous group communication to attain an informed judgment on a topic as systematically as possible [12]. Therefore, due to the new and innovative nature of this virtual TYA team, the technique was the most appropriate for achieving the objective of operationally defining the team functions, goals and objectives.

The method uses a panel of experts in a group communication that usually takes the form of questionnaires or emails, and uses three or more rounds to achieve a consensus view or general agreement. The initial questions posed to the panel are designed to elicit and develop individual responses; in further rounds, responses of all the experts are presented and the experts are required to refine anonymously their views in light of those expressed by other participants as the group's work progresses [12].

Table 1: The primary function of the TYA MDAT

- Register patients on relevant cancer registries/databases
- Forum to discuss psychosocial issues
- Forum to discuss complex cases
- Provide specialist advice for TYA healthcare professionals
- Recommend further support for TYA patients
- Encourage clinical trial recruitment
- Discuss all new and recurrent active TYA patients
- Add value to service that a TYA patient was already receiving
- Improve outcomes of TYA as per Improving Outcomes Guidance
- Clinician peer support
- Improve TYA 'patient experience'
- Promote optimal medical management and care that is developmentally appropriate
- Address psychological and social needs of the patient

Email was used to conduct a three-round Delphi study

Sample

Rowe and Wright [13] suggest that between 2-12 participants is sufficient for a small Delphi study. The aim, therefore, was to recruit all core members of the innovative TYA MDAT of the South West Region.

All core members (N = 8) of the TYA MDAT covering the South West Region were invited to participate and convene as a virtual panel, who remained anonymous throughout. The core members participated in each round. Six out of eight participants were female. The sample included representatives from a multi disciplinary group: Clinical Oncologist, Medical Oncologist, Clinical Psychologist; Paediatric Oncologist; Palliative Care Consultant; Social Worker; and Nursing representatives. They had a shared interest and demonstrated commitment to TYA specific clinical work.

Procedure and data collection

The initial questions of the Delphi were as follows:

1. What should the primary function of the TYA MDAT be?
2. What should the shared goals and aims of the team be?

Participants were asked to generate a free-text response to the questions, which was collapsed into common elements. These elements were compiled within a questionnaire format. Participants were asked to rate their opinion as to whether the element was important to answer the question, rating the element on a five-point Likert scale ranging from one "completely irrelevant – to include would be detrimental" to five "very important – must be included to fully answer the question".

Table 2: Shared goals and objectives of the TYA MDAT

- Meet primary functions of MDAT
- Provide highest level of advice and support on TYA issues
- Improve 'patient experience' of care
- Ensure patients are offered clinical trials where appropriate
- Ensure psychological and social needs TYA patient are
- Engage and support teams providing care for TYA
- Working collaboratively to improve outcomes for TYA
- Ensure patient is offered all appropriate avenues of support
- Involve palliative care where appropriate
- Provide patient-centred care in partnership with service-users
- Deliver/outline provision of best care for TYA
- Achieve Improving Outcomes Guidance standards
- Identify who will action decisions
- Provide developmentally and chronologically specific support
- Identify family needs
- Co-create service with TYA users
- Add to national evidence base of TYA work

Data analysis

Based on previous studies using the Delphi technique to indicate consensus agreement, the panel was required to demonstrate complete agreement or less than one point Inter-Quartile Range (IQR) on the importance of the elements [14].

Results

The primary function of TYA MDAT

Twenty-four elements were extracted from the eight email responses from the first round. This was collapsed to eighteen elements. To develop an agreed definition of the primary functions of the TYA MDAT all elements rated as "fairly important" or "very important", and an inter-quartile range of <0 were retained and stated in Table 1.

The shared goals and objectives of the TYA MDAT

Twenty-seven elements were extracted from the eight email responses from the first round Delphi study. This was collapsed to 17 elements. To develop an agreed definition of the shared goals and objectives of the TYA MDAT all elements rated as "fairly important" or "very important" and an inter-quartile range of <0 have been retained as Table 2.

Discussion

This Delphi study generated thirteen primary functions of the South West Region MDaT. These primary functions fall into three further categories: formal, clinical and professional functions.

Formal function elements include registering patients on relevant databases, encouraging trial recruitment and using the TYA MDaT to 'improve outcomes' as per the IOG guidance. This indicates that the MDaT meetings can be used as a forum to systematically fulfil requirements of the IOG guidance in a coordinated way, e.g. ensuring that all eligible patients in the region are registered on databases and clinical trials.

Clinical function elements are patient-focused and include discussing all new clinical cases to ensure optimum treatment; adding value to the service that the patient is already receiving; promoting optimal medical management and care that is developmentally appropriate; addressing psychological and social needs of the patient and improving patient experience. These functions show potential benefits of telemedicine that are less likely to be achieved through locality-based traditions of MDTs. Due to the increased accessibility of virtual team working, patients referred to the MDaT probably receive higher levels of participation by experts from a range of health professionals, both from their own locality and regional specialist centres. This may increase the quality of treatment and achieve optimum use of TYA-specific services. Team working across the region is also likely to improve communication between local and regional teams, which in turn should promote good team working, and increase awareness of roles and group cohesion – all factors associated with a better delivery of services [11,12].

In the third category, participants generated elements that related to addressing and developing the skills of clinicans using the virtual platform. This category included the following: providing specialist advice for TYA healthcare professionals; clinician peer support; recommending further support for TYA patients; and a forum to discuss complex cases and psychosocial issues.

The shared emphasis on both addressing the needs of the patient and the clinician demonstrates a key function of this particular MDaT - the 'advisory' element of the MDT. The South West TYA MDaT consciously evolved from a traditional MDT in which cases are managed by individual team members to adopting a more advisory role, enabling the team to work collaboratively with others across the region in a coordinated way that should increase the skills of referring clinicians, and disseminate relevant knowledge about TYA-specific resources in the region. By adopting this model, participation might increase as MDaT clinicians can offer advice and expertise without case management responsibility of additional cases, therefore benefitting the patient, the referring clinician and limiting the costs to MDaT clinicians.

Seventeen shared goals and objectives were generated by the TYA MDaT. Elements of the goals/objectives were mainly to ensure achievement of the identified functions of the team and the IOG, as previously discussed. Additional aspects in this section included inter-agency liaison, such as engaging and supporting other TYA services, working collaboratively, providing and co-creating care in partnership with service-users. This suggests that a core theme of the goals/objectives was to promote the use of the TYA MDaT within the broader cancer care context, particularly relating to Patient and Public Involvement (PPI) in services. This has been a priority and a highly valued aspect of service innovation, development and implementation in recent years by the Department of Health [15]. Furthermore, it contributes to a wider evidence base in the treatment of cancer among the TYA population, further benefitting the patient.

The element "identify who will action decisions" indicates the importance of specific roles within the team, echoing previous findings [6]. This suggests that this is an opportunity for development within this relatively new team.

In summary, it is evident that the functions of a MDaT or a TYA MDT are multifaceted. As with traditional MDTs, there are requisite procedures and policies that require adherence; however, emergent themes suggest that developing clinicians' own skills that can be generalised is as high a priority as achieving optimum care for patients. Priority is also given to PPI and the broader context.

Clinical implications

Based on the previous developments of TYA services within the UK, there is no literature available to identify what a potential blueprint of a TYA service team could/should look like. The findings of this study can be used by other TYA teams to formalise their responsibilities and direction of energy when a service is in its earliest stages. It would enable clinicians to consider what solutions might be required to deliver an efficient service to meet the needs of all their TYA patients with cancer, taking into account their unique geographical and demographical requirements. New technological advances, such as an online platform, are core to the delivery of the TYA service, and it is evident that the development of the team around the technological solution is paramount to its effective operation. Delphi has enabled quantification of team goals and direction, in a diplomatic, democratic and statistically reliable way. The process enabled the team to engage with the challenges of virtual team working by using a whole-systems approach for transformational change to deliver a new service that co-exists with a traditional model of care. The purpose of the TYA MDAT is to add value to any experience the teenager and young adult diagnosed with cancer encounters, and the priorities identified using the Delphi technique provide a firm evidence base to deliver a high performance, high quality information and clinical governance compliant service.

Limitations

The Delphi study expert panel was sampled from a single TYA MDaT, and therefore may express opinions specific to the operation of this particular team. It may have benefitted the study to involve other experts in other teams as the outcome of the Delphi may have been influenced by the culture and expectations that have developed since the inception of the TYA MDaT in 2009.

However, the information generated from this Delphi study remains a valuable resource to inform future development of similar teams where there is currently limited relevant evidence to support this innovative process. ■

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