How to facilitate decision-making for hematopoietic stem cell transplantation in patients with hemoglobinopathies

Considerations of healthcare professionals

Name student: Herma I. van Zanten
Student number: 6226485
Status: Definitive version
Date: 19 June 2020
Education: Master Clinical Health Sciences, Nursing Science. Utrecht University
Supervisors: Mw. drs. H. Mekelenkamp
Lecturer: Mw. dr. H. Westland
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Abstract

Title: How to facilitate decision-making for hematopoietic stem cell transplantation in patients with hemoglobinopathies. Considerations of healthcare professionals.

Background: Somewhere in their treatment trajectory pediatric, adolescent, and young adult patients with hemoglobinopathies may be offered the option of hematopoietic stem cell transplantation. As a consequence, they have to make a complex choice between the continuation of non-curative treatment and transplantation as a curative therapy. Transplantation indications are not strongly standardized, making it more difficult for healthcare professionals to support patients in decision-making. It is unclear how the healthcare professional's considerations influence the decision-making process. Gaining insight into the considerations of healthcare professionals is required to optimise the decision-making process in circumstances in which there is no clear-cut answer as to what the best treatment is.

Aim: This study aimed to identify the considerations of health care professionals, who are involved in the decision-making process, in deciding on hematopoietic stem cell transplantation.

Method: A qualitative descriptive study with eighteen health care professionals was performed. Data were thematically analyzed.

Results: Five main themes described the considerations of healthcare professionals: decision-making for transplantation in hemoglobinopathies is a process; making the effort to inform; experiencing the influence of a frame of reference; weighing up disease severity against treatment complication; and making the right decision for the individual patient.

Conclusion: The considerations of healthcare professionals provides insight into the complex decision-making process. Healthcare professionals are making the effort to inform the patient and guard the decision-making process. However, the professionals seem to have difficulties with exploring the patient's preferences and integrating these into the decision-making process.

Recommendations: Providing decision support tools and training for professionals on how to include patient preferences can be used to support a shared decision-making approach. Future research should focus on how to explore patient's preferences and how to include these in decision-making support tools.

Keywords: decision-making, hematopoietic stem cell transplantation, health care professional, hemoglobinopathy.

Samenvatting (Dutch)

Titel: Hoe kan de besluitvorming over stamceltransplantatie bij patiënten met hemoglobinopathieën worden gefaciliteerd. Overwegingen van zorgprofessionals.
Achtergrond: Ergens in het behandeltraject kan aan kinderen, adolescenten en jongvolwassen patiënten met een hemoglobinopathie een stamceltransplantatie worden aangeboden. Als gevolg daarvan moeten zij een complexe keuze maken tussen doorgaan met de niet-curatieve behandeling of stamceltransplantatie als curatieve therapie. De indicatie van transplantatie is niet sterk gestandaardiseerd wat de besluitvorming ook voor zorgverleners moeilijk maakt. Het is onduidelijk welke overwegingen van de zorgprofessional het besluitvormingsproces beïnvloeden. Om het besluitvormingsproces te optimaliseren is inzicht nodig in de overwegingen van de zorgprofessionals die bij dit proces betrokken zijn, waarbij er geen eenduidig antwoord is op de vraag wat de beste behandeling is.
Doel: Het doel van de studie was het in kaart brengen van de overwegingen die worden gebruikt door zorgprofessionals die betrokken zijn bij het besluitvormingsproces over stamcel transplantatie.
Methode: Een kwalitatieve, beschrijvende studie werd uitgevoerd. Achttien zorgprofessionals werden geïnterviewd. De data werd thematisch geanalyseerd.
Resultaten: De overwegingen van zorgprofessionals die van invloed zijn op het besluitvormingsproces zijn in vijf thema's beschreven: besluitvorming voor transplantatie is een proces; inspanning leveren om te informeren; beïnvloeding door het referentiekader; afwegen van ziekte ernst tegen complicaties van de behandeling; en de juiste beslissing nemen voor de individuele patiënt.
Conclusie: De resultaten gaven inzicht in de overwegingen van zorgprofessionals met betrekking tot het complexe en continue proces van besluitvorming. Zorgprofessionals doen veel moeite om de patiënt te informeren en het besluitvormingsproces te bewaken. Daarbij lijken de professionals het lastig te vinden om de patiënt voorkeuren te onderzoeken en daar rekening mee te houden in het besluitvormingsproces.
Aanbevelingen: Instrumenten en training met betrekking tot het meenemen van de voorkeuren van de patiënt kunnen ondersteunend zijn in het gezamenlijk besluitvormingsproces. Toekomstig onderzoek kan zich richten op wat nodig is om de voorkeuren van de patiënt te verkennen.

Kernwoorden: besluitvorming, stamceltransplantatie, zorgprofessional, hemoglobinopathie.

Introduction

Chronic blood diseases, hemoglobinopathies, are one of the most common recessive diseases affecting humans worldwide.[1] About 7% of the global population is a carrier of a hemoglobinopathy. Annually, approximately 500,000 affected children are born, 30% of them have thalassemia, and 70% have Sickle Cell Disease (SCD).[2] Hemoglobinopathies originally occurred in the tropics and subtropics, but due to migration they are now common worldwide.[1] In the Netherlands, every year 40-60 children are diagnosed with SCD by neonatal screening, and approximately 800 SCD carriers are known.[3]

Hemoglobinopathies are inherited diseases of the red blood cell. Thalassemia is characterised by lifelong anemia, which requires regular blood transfusions. If patients are not treated with an iron-chelating therapy, an iron overload increases the risk of organ failure and mortality.[4] Patients with SCD have to deal with painful vaso-occlusive crises which negatively affect their quality of life.[4-6] These patients may receive non-curative treatment with hydroxy-urea-based medication, which decreases the number of blood cells in bone marrow.[7] This therapy requires strict adherence to medication and lifestyle.[8] In case of insufficient functioning of this therapy, patients need frequent blood transfusions or exchange with possible iron chelation therapy.[9] Although this medical therapy is improving, allogenic hematopoietic stem cell transplantation (HSCT) remains currently the only curative therapy.[4,10,11]

Decision-making about HSCT is a complex process.[12] For pediatric, adolescent, and young adult (PAYA) hemoglobinopathy patients, HSCT can lead to curation and a life without pain crises and chronic blood transfusions.[4] HSCT is a promising treatment, although it has associated risks. These risks include complications of (non-)myeloablative conditioning, chronic graft versus host disease, graft failure, and graft rejection or mortality.[4,13] Despite (inter)national criteria for transplantation, such as those concerning on disease severity and donor availability, it remains difficult for healthcare professionals (HCPs) to decide about transplanting hemoglobinopathy patients.[14,15]

As there is no clear-cut answer to what the best treatment would be, a shared decision-making (SDM) approach can facilitate the decision-making process for a possible HSCT in hemoglobinopathy patients.[16] SDM is a collaborative process and involves building a partnership, agreeing on the problem, providing information on the available options with benefits and risks, discussing the patient's preferences on these options, and agreeing on the next step.[16] SDM can decrease uncertainty, clarify the patient's future health status, and involve the patient's and/or caregiver's preferences and values, which facilitates the making of high-quality decisions.[17-19]

Although SDM has been shown the preferred model in situations where the patient preferences are decisive, it remains unclear which considerations HCPs use in decision-making about transplantation in current practice.[14] Achieving an appropriate shared decision-making process for patients with hemoglobinopathies deciding on HSCT requires more insight into the influencing considerations of HCPs.

Aim

This study aims to identify the considerations used by healthcare professionals involved in the decision-making process with pediatric, adolescent and young adult patients and/or caregivers, deciding on hematopoietic stem cell transplantation.

Method

Study design

A qualitative study about considerations used by HCPs was conducted. A qualitative design was considered most appropriate to identify and describe the HCP's considerations.[20]

Population and recruitment

This study is part of a multi-centre study, focusing on insights into the HSCT decision-making process from the perspectives of PAYA patients (0-35yr) with hemoglobinopathies, their caregivers, and the involved healthcare professionals deciding on HSCT. This multi-centre study took place in six pediatric and hematology departments in the Netherlands specialized in treating PAYA patients with hemoglobinopathies. The present study describes the results of the interviews with the involved HCPs. Using purposive sampling, a total of eighteen HCPs including hematologists, transplantation specialists, and nurse practitioners from the involved hospitals were informed and invited by email to participate.[21] Oral informed consent was reconfirmed before conducting the interviews. Ethical approval for the multicentre study was given by the medical ethics committee of Leiden University Medical Center (P17.084).

Data collection

Individual in-depth, face-to-face interviews were conducted in Dutch. Each HCP was interviewed once, and the interviews took place at the HCP's office. The interviews were conducted by a pediatric hematology nurse involved in the transplantation process and with

extensive experience as an interviewer (HM). The interviews were audio-taped with the permission of the HCPs and transcribed verbatim.

A semi-structured interview guide was used to verify whether all topics were discussed during the interview (Table 1).[21] The topics were based on preliminary studies on HSCT decision-making and experts' experiences.[19,22-26] The interviews started with an open and broad question. The topics were guided by open-ended questions. The topic list was evaluated and adjusted by the research team, based on the performed observations and interviews.[27]

[Table 1 about here]

Observational memos were made describing the setting, atmosphere, circumstances, and the researchers' reflections on the interview theme.[27] All data were encoded, safely stored, and handled confidentially. Theoretical saturation was reached after sixteen interviews since the analysis of new interviews did not add to the descriptions of the themes and no new themes emerged.[21]

Data analyses

To identify patterns and themes that truly reflect the considerations of the HCPs, thematic analysis was used.[20,21,27] Transcripts were read and reread for familiarisation with the HCP's considerations and for the generation of initial codes (HM,HZ). Line-by-line open coding was conducted independently (HM,HZ). The codes were compared and grouped into categories and finally described into themes. All relevant data were structured to each theme.[21] The themes were checked against each other and compared with the transcripts to verify the themes reflected the original dataset (HM,HZ).

To reach interrater reliability, discrepancies in coding, developing of categories, and defining and naming themes were discussed until consensus was reached. The themes were refined, and illustrative quotes were selected (HM,HZ). The research team was involved in all phases of data collection and analysis to enhance validity and credibility.[21] The COREQ checklist was used to enhance comprehensive reporting.[28] The use of ATLAS.ti qualitative data analysis software (Scientific Software Development GmbH, Berlin. Version 8, 2019) to manage the data made the research process systematic and transparent.

Results

Between July 2017 and January 2020, eighteen HCPs, including ten physicians from referring centres, five transplantation specialists from HSCT centres, and three nurse

practitioners from referring centres, were interviewed. None of the HCPs approached, declined to participate. Maximum variation was achieved for profession and years of experience working with patients with thalassemia or SCD (range 1-29 years) (Table 2). The interviews lasted on average 38 minutes (range 27-57 min). Five themes emerged from the interviews that described the HCP's considerations: *Decision-making for HSCT in hemoglobinopathies is a process; Making the effort to inform; Experiencing the influence of a frame of reference; Weighing up disease severity against possible complications*, and *Making the right decision for the individual patient*. Although presented separately, the themes together demonstrated that HCPs paid much attention to the process of decision-making, to promote a well-considered decision with the individual patient about transplantation. For illustrative quotes, see Table 3.

[Table 2 about here]

Theme 1 Decision-making for HSCT in hemoglobinopathies is a process

All the HCPs indicated that decision-making about transplantation is a continuous and complex process, which starts from the diagnosis. Conversations about treatment options were mostly based on questions of the patient and/or caregivers or when the disease severity increased. Some HCPs described that the decision-making process is complicated by the child's involvement depending on the age and development phase. HCPs described the importance of a trustful relationship with patients in which they put effort into stepwise guidance towards a stable health condition of the patient. As a result, sometimes all attention of the HCPs was focused on performing supportive care and encouraging compliance.

The importance of team collaboration between the referring physician and the HSCT specialist to reach consensus about the patient's disease progression and indication for HSCT was emphasised by the HCPs.Decision-making about HSCT was considered as a continuous collaboration process between the patient and/or caregivers and the involved HCPs, to support the patient in choosing the best fitting treatment.

Theme 2 Making the effort to inform

To support the patient in decision-making, all HCPs emphasised their key role in providing the patient with objective information about the pros and cons of all treatment options to facilitate successful treatment decision-making. After diagnosis, most HCPs stated that they provided information about HSCT regularly during the treatment over the years. Besides, providing information depended on the questions of the patient or the increase of

disease severity which could be an indication for transplantation. Gradually enlarging the patient's knowledge about the disease and possible treatments facilitated the SDM process.

All HCPs indicated that information should be tailor-made and focused on the individual patient. They pointed out that spending extra time in their contact with patients enabled them to discuss fears, questions, wishes, and needs. The HCPs were aware of various sources of information and they emphasised the importance of checking the available knowledge and adjusting (false) expectations, especially in times with the huge impact of social media. Several HCPs stated that a well-considered choice, made by a well-informed patient and/or caregivers, should be respected and supported. The importance of an optimally informed patient and/or caregivers was considered a prerequisite for taking a high-quality decision about the treatment options.

Theme 3 Experience the influence of a frame of reference

The opinions of the HCPs about transplantation were formed by available knowledge and formed experiences. Their opinions influenced their conversations with the patient and/or caregivers, and the decision-making process regarding the treatment options. Some HCPs stated that they consider their own opinion as irrelevant and that informing the patient is most important. However, when the disease severity increased and indication for HSCT strengthens, the HCPs gave the patient stronger advice about the treatment options.

The HSCT specialists indicated that they have a positive opinion about transplantation, due to their knowledge and successful experiences, which reflects in their conversations with the patients. The majority of the referring physicians said they had positive and negative experiences, due to the various results in their patients who had undergone HSCT. Some referring physicians were not convinced about the treatment, as they had experienced a lack of evidence or had a specific case in mind with bad outcomes. On the other hand, they realised that supportive care and the transplantation treatment is improving, and therefore, indications for transplantation are shifting. Some of the referring physicians found it difficult to keep track of the latest developments. They explained that when a patient was eligible for HSCT, or the patient asked questions about transplantation, they referred the patient to the transplantation specialist for the most recent, specific, and tailor-made information.

Despite medical developments and hope for curation with the possibilities of gene therapy, most of the HCPs stated that it is not in the patient’s best interest to wait if the patient has an indication for HSCT. Some HCPs explained that age occasionally influences the timing since the conditioning for adults is improving. The frame of reference of the HCPs influenced their considerations and appeared to be an important factor in the decision-making process.

Theme 4 Weighing up disease severity against possible complications.

HCPs were struggling with the dilemma between disease severity, the long-term consequences of the disease, and the possible complications of transplantation. In the case of SCD, the long-term unpredictability and severity of the disease, reduced quality of life, and risks of transplantation complicated the decision-making process. Therefore, decision-making in SCD was mainly indicated by the HCPs as a preference-sensitive decision, because they had to weigh up the (future) complications of the disease against the risk of the treatment with HSCT. In contrast, for patients with thalassemia, transplantation was considered as an effective treatment due to limited life expectations and the protocolized treatment.

Most HCPs described that patients can respond well to medication so that there seems no indication for transplantation. However, these non-curative treatments do not resolve the long-term consequences of the disease and can cause severe side effects and a limited live expectation.The significant risk of long-term complications from conditioning with chemotherapy, including infertility, organ damage, and the risks of the transplantation, such as graft versus host disease, was mentioned by all HCPs. On the other hand, they considered that treatment without complications significantly improves the quality of life of the patient and/or caregivers. Therefore, the HCPs explained that the window of opportunity is difficult to estimate. Some HCPs described post-transplant identity and adaptation problems because patients never experienced their lives without the burden of the disease. Some physicians described the dilemma between adherence to (inter)national guidelines and indications for HSCT, and the patient's and/or caregivers' request for transplantation.

The availability of a suitable donor was an important consideration for HSCT. The majority of the HCPs explained that a sibling donor is preferred. Opinions on other donor possibilities, like a matched unrelated donor or a Haplo-identical donor, were divided due to the different frames of references of the HCPs. The (future) complications of the disease, the risks of the transplantation, and donor availability turned out to be important considerations for shared decision-making.

Theme 5 Making the best-fitting decision for the individual patient

The patient's medical and psycho-social situation, treatment compliance, and the perceived burden of the disease were important considerations for HCPs in determining the ideal timing to perform an HSCT. Most HCPs stated that the patient and/or caregivers needed time for the decision-making process and indicated if, and when the process for HSCT should be started. The medical and social situation of the individual patient was an

important prerequisite for the HCPs in the decision-making process and the timing of transplantation.

Timing of providing information and offering transplantation depended on the results of weighing up the disease severity against the complications of the treatment, and if the patient started asking questions about transplantation. Besides, the availability of an appropriate donor was essential. Before HCPs can offer transplantation, they emphasised the importance of medical and psycho-social stability in the patient. Providing psychological support and medical care in a relationship of trust was considered essential by all HCPs before proceeding to the next stage of the decision-making process. Since many patients were non-European, the experiences of the patient and/or caregivers with the disease in the country of origin, incurred trauma, cultural and religious considerations, and language barriers, influenced the decision-making process. Nevertheless, HCPs offered the transplantation when the patient meets the (inter)national criteria. Compliance with the treatment was mentioned by all HCPs as a prerequisite to stabilize the disease. Furthermore, compliance is of great importance for an intense treatment like HSCT to prevent complications. Taking medication according to prescription, adherence to lifestyle advice, and a supporting caregiver are necessary conditions to increase the likelihood of a successful HSCT.

The perceived burden of disease was included by all HCPs in the decision process, but they found it hard to estimate and quantify. The disease course is unpredictable, and patients can suffer from complications. Patients can also experience fear of the unknown, treatment complications, and death, which has a great impact on the quality of daily life.

The referring physicians and nurse specialists described their strong involvement with their patients and wanted the best for their patients. Some HCPs referred to the role of the nurse practitioner, who often know the patient for several years, and has built a relationship based on trust, which enables them to respond to the wishes and needs of the patient and/or caregivers and providing a sounding board also for difficult decisions, like future treatment. Considerations about the medical and psycho-social situation of the patient, the adherence to therapy, impaired quality of life, and the importance of a relationship of trust influenced the decision-making process and the timing of providing information and referring to an HSCT centre.

[Table 3 about here]

Discussion

This qualitative study explored the considerations used by HCPs involved in the decision-making process with PAYA patients, deciding on HSCT, and five identified themes were described. The HCPs considered decision-making for HSCT in hemoglobinopathies as a continuous and complex process. The HCPs made a lot of effort to increase the patient's knowledge to enable a well-considered and high-quality decision. The HCPs weighed the disease severity against treatment complications, influenced by their reference framework. The HCPs were motivated to make the right decision for the individual patient.

HSCT was considered an effective treatment, therefore decision-making for patients with thalassemia was less complicated. In contrast, transplantation for SCD patients was mainly indicated as a preference-sensitive decision and therefore the decision-making process was more complicated. The HCPs were aware that indications for transplantation are shifting due to medical development, and this complicated the decision-making process.

Bakshi et al described a collaborative and proponent approach in the process of decision-making.[29] In our research, the collaborative approach was applied as the HCPs were driven to inform the patients and discussing all possible treatment options to assist in the decision-making process. A more proponent approach, by providing stronger advice, was used when the patient met the (inter)national criteria for transplantation.[30] Bakshi et al found three influencing factors on these approaches: disease severity, intensity of treatment, and urgency of treatment. Besides, our research showed that the HCP's frame of reference strongly influenced the way the HCPs approached the decision-making process. Mikles et al found that HCPs expressed various levels of enthusiasm for referral for evaluation, based on eligibility, donor availability, and acceptable risk.[25] Different HCP perspectives may affect patient referral for transplant consideration.[25] We found also that the cut-off point when to offer transplantation is unclear. Moreover, the timing of counseling and referring to an HSCT centre depends on the HCP's reference frame, medical and psycho-social stability, (inter)national criteria, and compliance to the treatment.

Previous research has indicated that education and informational support on the long-term complications is needed when considering a decision about HSCT.[29,31,32] Informing the patient about the treatment options, benefits and harms of each option, and whether the patient has enough information to make a choice, are important issues in the decision-making process.[33] Another important aspect of SDM is exploring the patient preferences in helping to make choices in decisions where there is no clear-cut answer to what the best treatment will be.[33,36,40] Our research showed that HCPs are driven to provide the patient with objective information to make a well-informed shared decision. However, we found also

that HCPs seemed to have difficulties including the patient preferences in the decision-making process, they did not indicate how they weighed the patient preferences.

This study has several strengths. This study is nested in a more extensive study, multiple centres and various professionals are involved, which gave a broad view of the perspectives. The investigator (HM) has a lot of knowledge about transplantation as a hematology nurse. As a result, more in-depth information was obtained during the interviews, and the interviews were welcomed by the HCPs as peer review conversations because of the perceived complexity of the subject. Data saturation was achieved within eighteen interviews, which strengthened the transferability. Maximum variation, by the sampling of years of experience and profession (hematologists, HSCT specialists, and nurse practitioners) was used to increase the likelihood of diversity and transferability of the results.

A few limitations need to be considered. The interviewer is well known to the HCPs, which might have affected data dependability, as this could have inhibited the HCPs in expressing their perceptions and considerations. Since the interviews took place in the HCP's office, the interviews were occasionally disturbed by telephone calls or other professionals. On the other hand, the HCPs were easy to reach and cooperative. Respondent validation of the themes would have strengthened the findings.

The results of our qualitative study have implications for clinical practise regarding the decision-making process in complicated situations. Providing up-to-date information to patients and/or caregivers in SDM and verifying whether patients have understood all information is of great importance. Supporting HCPs with a decision support tool or information technology intervention will benefit the SDM process.[36-38] Better informed patients will play a more active role in decision-making.[34]

Besides, in SDM the patient preferences must be taken into account. Therefore, a step-by-step model can help to explore the patient's preferences and values, and facilitate integrating these into the decision-making process.[40] SDM is not routine and needs tactics, strategies, and communication skills to support patients to become more involved in decision-making.[16,31] A specific training course can be helpful to optimise the SDM process.[41]

Due to their relationship of trust and their long-term involvedness with the patients, the nurse practitioner could play a coordinating and more supportive role in coaching and helping patients and/or caregivers to make a well-considered decision about possible treatments.[17,42,43]

This qualitative study is an exploration of the considerations of HCPs in SDM. Future research should focus on how to explore the patient's and/or caregivers' preferences and values. The results can be used by HCPs in the shared decision-making process about

possible treatments in situations where there is no clear-cut answer to what the best treatment for the individual patient is.

In conclusion, the five themes found in this study provided insight into the considerations of HCPs regarding the decision-making process in situations where there is no consensus about what the best treatment is for the individual patient. Decision-making is a continuous and complex process. The HCPs, influenced by their frame of reference, are driven to provide information and to guard the decision-making process. The HCPs need support in how to take the patient's preferences into account to promote a well-considered shared decision. Gaining these insights can help to improve care for patients and improve research studies.

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Tables

Table 1 Interview topics

Interview topics
Opening question: Can you tell me something about your history and involvement with this patient and/or caregivers? What is the patients disease progression until now?
1. What can you tell me about the disease progression of this patient
2. How did the conversation with your patient about stem cell transplantation started
3. Which considerations are you weighing when you discuss stem cell transplantation with your patient
4. What is your own opinion about stem cell transplantation?
5. Which methods of providing information and guidance do you use?

Table 2 Characteristics of participating HCPs

Profession	**Gender**	**Years of experience** Mean (range)
Hematologist referring center (N=10)	8 female 2 male	18 (4-29)
Transplantation specialist HSCT center (N=5)	2 female 3 male	5 (1-17)
Nurse Practitioner (N=3)	3 female	8 (3-15)

Table 3 Illustrative quotes

Theme	Definition	Illustrative quote
1. Decision-making for HSCT in hemoglobinopathies is a process	The HCPs follow a continuous process of informing an	*R17. "Well, there's never an SCT discussion. You build up a relationship and communicate, and things are discussed all the time, with different accents, and that expands. That's actually a continuous process" (referring physician).*
2. The effort to inform	The HCPs intention to completely inform the patient	*R13: "And then I would prefer them (the parents) to say we decide because we are very well informed and we know what we are deciding about. I would find that the best answer" (HSCT specialist).*
3. Influenced by a frame of reference	The HCPs are influenced by their knowledge, positive and negative experiences, and their involvedness with the patient.	*R3: "Yes, but it shifts because there are signs that transplantation is getting better, about 10 years ago no one dared to transplant a sickle cell, and now with pre-conditioning and so on, you know, also for the thalassemia, it shifts very fast. But I don't think, technically, that it's effective yet..." (referring physician).*
4. Weighing up disease severity against treatment/possible complications	The HCPs consider the disease severity and the complications of the treatment as important before they can make a shared decision	*R18: "Doing nothing is also an option, because you can get really sick from a transplant and get all the complications in the world and just die with GvH and leukemia, and an infection and an ICU" (referring physician).* *R17: "If there is a suitable donor with a healthy child, a good starting situation then I really like the idea that with an early transplantation you can improve the quality of life significantly in the long run because you can reduce the iron load and that kind of misery and prevent it further. In fact, you can cure a child of his illness and its chronicity and then you sincerely hope that it may be an uncomplicated trajectory" (referring physician).*
5. Making the best fitting decision for the individual patient	The HCPs are dedicated to take the total situation of the individual patient into account, when deciding on HSCT.	*R10 "So yes, it is becoming a bit of a customization and it is a bit of a combination of how senang (safe) the doctor feels about the transplant, how hard caregivers insist, how good the possible donor is, how good the overall condition of the patient is. It is not very easy. It is summing up" (HSCT specialist).*