ABSTRACT
This research examined pediatric oncologists coping strategies when their patients died of cancer. Twenty-one pediatric oncologists at 2 Canadian pediatric academic hospitals were interviewed about their coping strategies when patients died or were in the process of dying. The grounded theory method of data collection and data analysis were used. Line-by-line coding was used to establish codes and themes and constant comparison was used to establish relations among emerging codes and themes. Pediatric oncologists used engagement coping strategies with primary and secondary responses including emotional regulation (social support and religion), problem solving (supporting families at end of life), cognitive restructuring (making a difference and research), and distraction (breaks, physical activity, hobbies and entertainment, spending time with own children). They also used disengagement coping strategies that included voluntary avoidance (compartmentalization and withdrawing from families at end of life). Given the chronic nature of patient death in pediatric oncology and the emotionally difficult nature of this work, medical institutions such as hospitals have a responsibility to assist pediatric oncologists in coping with this challenging aspect of their work. Future research is needed to evaluate how best to implement these changes on the institutional level to help oncologists cope with patient death and the effect of using these strategies on their quality of life.

KEYWORDS
pediatric oncologists; patient death; coping; grief; qualitative research

Introduction
Pediatric cancer patients and their families have a high degree of contact with the healthcare team including the pediatric oncologist, especially during the first 3 years of diagnosis and treatment (Young, Dixon-Woods, Findlay, &
Heney, 2002). Oncological treatment usually consists of a combination of surgical interventions, chemotherapy, and/or radiation, and requires intense monitoring and surveillance. As such, many pediatric oncologists will develop emotional attachments to their patients, approximately 20% of whom will die under their care (Ries et al., 1999). Research in the field has indicated that pediatric oncologists experience grief when their patients die (Granek, Bartels, Scheinemann, Labrecque, & Barrera, 2015; Plante & Cyr, 2011) and that this is an especially challenging aspect of their work (Fanos, 2007; Hilden et al., 2001). Despite this fact, the research on coping with the death of a child from cancer has focused almost entirely on family member’s experiences of this type of loss (Barrera et al., 2013; Gerhardt et al., 2012; Granek et al., 2013; Kazak & Noll, 2004).

Despite the fact that dealing with patient death is a robust part of the work oncologists do, few studies have examined how oncologists cope with chronic patient loss. One study of oncologists who treat adults found that they used the cognitive strategy of compartmentalization and the practical strategy of withdrawing from families at end of life in order to avoid dealing with the emotional strain of patient death (Granek, Mazzotta, Tozer, & Krzyzanowska, 2013). Another study that looked at oncology social workers, physicians, and nurses found that these healthcare providers drew on a number of coping strategies to deal with the emotional burden of their work including taking vacations, exercising, seeking social support, and engaging in spiritual practices (Rohan, 2015; Rohan & Bausch, 2009). Other research has reported that physicians who treat adults (including oncologists) turn to social support, exercise, and faith to cope with their grief (Moores, Castle, Shaw, Stockton, & Bennett, 2007; Shanafelt, 2005). Lastly, one study that looked at medical personnel in general found that daily spiritual experiences was associated with less physical, cognitive, and emotional distress in these healthcare professionals (Holland & Neimeyer, 2005).

In the pediatric context, there have been limited studies on how other healthcare professionals cope with patient death. Two reviews examined what resources were available to healthcare professionals but did not report on how many healthcare professionals accessed or used these services, nor did they examine healthcare professionals’ individual coping strategies with patient death (Conte, 2011; Bravestock & Finlay, 2006). One empirical study that looked at 101 general pediatric healthcare professionals found that 85% of the sample spoke with colleagues, family, and friends about their emotional reactions to patient death (Plante & Cyr, 2011). Another study that looked at 63 pediatric oncology physicians and nurses found that nurses tended to grieve more openly with others, while physicians tended to grieve in private (Papadatou, Martinson, & Chung, 2001). Social support at work has also been identified as an important factor in helping pediatric oncology nurses cope after a patient has died (Papadatou, Papazoglou, Petraki, & Bellali, 1999). Similarly, Sternmarker, Hallbert, Palmerus, and Marky (2010) interviewed
10 pediatric oncologists and found that sharing concerns with colleagues was one way to cope with patient death. Social support at home was also found to be a personal coping strategy for pediatric oncologists after patients died (Fanos, 2007).

Although these limited studies on pediatric oncologists’ responses to patient death have begun to shed light on how this population responds to patient death, none have used established theoretical models to organize their findings. In addition, only a few have conducted in-depth empirical examinations of ways in which pediatric oncologists cope with chronic patient death. There are several theoretical models of coping in the field that may be relevant to how healthcare professionals cope with patient death (i.e., Carver, Scheier, & Weintraub, 1989; Folkman & Lazarus, 1980). One of the most comprehensive, empirically tested, and integrated models of coping was proposed by Compas and colleagues (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000). The authors identified four main strategies to respond to stressors: Individuals can respond with voluntary or involuntary reactions, in an engaged or disengaged manner. In this model, however, coping refers solely to “conscious volitional efforts to regulate emotion, thought, behavior, physiology, and the environment in response to stressful events or circumstances” (Compas et al., 2001, p. 89). Engagement coping responses are divided into primary and secondary control responses. Primary control coping responses refers to actively taking control of the situation or of one’s responses to stressors. Examples include actions such a problem solving, emotional regulation, and emotional expression. Secondary control coping responses, in contrast, refers to the person’s attempts to adapt to the stressful situation. Examples of secondary control responses include actively engaging in distraction, cognitive restructuring, and acceptance.

Disengagement coping involves responses that have to do with withdrawing or avoiding the stressful situation. Examples of disengagement coping responses can include voluntary avoidance, denial, and wishful thinking. Although individuals can also respond with involuntary avoidance reactions when confronting a highly stressful event (involuntary flight reaction), according to this model only conscious voluntary responses are referred to as coping strategies. Compas’ coping model appears to be a good framework for understanding how pediatric oncologists cope with the death of their patients. As such, this qualitative study set out to examine pediatric oncologists’ coping strategies guided by Compas’ conceptual model of coping.

**Method**

**Study design and participants**

This study was part of a larger project on pediatric oncologists’ experiences of patient death (Granek et al., 2015; Granek, Barrera, Scheinemann, & Bartels, in press; Granek, Bartels, Barrera, & Scheinemann, 2015; Granek, Bartels,
Scheinemann, & Barrera, 2015). The grounded theory method of data collection and data analysis was used (Glaser & Strauss, 1967). Research ethics board approval was obtained at each participating center before the launch of the study. Pediatric oncologists from two academic pediatric hospitals in Ontario, Canada, were emailed information about the study and asked to respond to the e-mail message if they were interested in hearing more about the research. Eligibility criteria included having had a patient die in their care and an ability to participate in an interview. Purposive sampling was used to target three groups of oncologists who were at different stages of their career trajectory and who varied in their subspecialties, gender, and ethnicities. Twenty-one pediatric oncologists agreed to participate in the study after hearing more about the research and the time commitment involved. A semi-structured interview guide that was revised in the ongoing process of data collection and analysis was used. Questions were open-ended and focused on coping strategies when patients died or were in the process of dying. The interview guide presented in Table 1 was developed by L.G. in consultation with the research team that includes two pediatric oncologists and a clinical psychologist. Interviews were conducted by L.G. and took place at a time and place convenient to the participant. All interviews took place in the hospital either in the oncologist’s offices or in a quiet space that was not being used at the time of the interview such as in a staff room. With the verbal and written permission of the participants, interviews were recorded and transcribed verbatim with all identifiable information removed from the transcripts. Interviews ranged from 45 min to 1.5 hr.

Table 1. Interview questions focused on coping with patient death.

- How do you cope with a patient’s death or approaching death?
- Do you talk about the patient’s death or approaching death with any of your colleagues?
  - If yes, who, and how did they react? Was it helpful?
  - If not, what do you wish they would have said instead?
  - If didn’t talk to colleague, why not?
- Do you talk about the patient’s death or approaching death with your family and friends?
  - If yes, who, and how did they react? Was it helpful?
  - If not, what do you wish they would have said instead?
  - If didn’t talk to family or friends, why not?
- Do you have any professional resources you could turn to in order to deal with patient death?
- What kinds of support or interventions would you like from your employers to deal with patient death?
- Does your religious faith help you cope with patient death?
  - If so, how?
- What other resources do you turn to, if any, to help you cope with patient death?

Concluding Study Questions:

- A primary objective of this research is to examine what pediatric oncologists find most helpful in terms of dealing with patient death. Is there anything else you would like to see happening in your professional practice to help you manage patient death that we have not already talked about, or that you wish to expand on?
- Is there anything else that I haven’t asked you about that you feel is important for me to know? Or is there anything else about anything that we have talked about that you wish to expand on?
**Data analysis**

Data collection and analysis took place concurrently and line-by-line coding of the transcripts was used. L.G. and a research assistant separately coded the first five transcripts, followed by team discussions on the developing coding scheme to ensure consistency between coders and validity of the emerging findings. L.G. met with the research assistant every week to discuss emerging concerns over definitions of codes and categories. Analysis was inductive with codes and categories emerging from participants’ stories. Compas’ theoretical model of coping (Compas et al., 2001; Connor-Smith et al., 2000) guided the analytic organization of the emerging themes without using pre-conceived codes or categories. As the analysis continued, the descriptive codes were further distilled to capture the major emerging themes and subthemes from the narratives. These themes were further categorized into dimensions of primary and secondary control coping responses. Constant comparison was used to examine relationships within, and across codes and categories. L.G. memoed thoughts, reflections, and reactions throughout the process of data collection and analysis. NVivo 9 computer software was used to organize, code and store the data. Analysis stopped when the team determined to have reached data saturation (no new themes emerged from the data analysis).

**Results**

Study participants included 10 men and 11 women who ranged in age from 31 to 74 years, with the average age being 43 years. Years of experience in pediatric oncology ranged from 1 to 43 years, with an average of 12 years and a median of 10 years of experience. Six pediatric oncologists treated neuro-oncology, six treated solid tumors, five treated leukemia and lymphoma, and four treated general oncology, with some physicians reporting that they treated more than one site. Pediatric oncologists reported that they estimated approximately 1.5 deaths per month in their practice, with a range of less than 1 death to 13 deaths per month. Six participants were fellows, six were junior oncologists with less than 10 years of experience, and nine were senior oncologists with more than 10 years of experience.

Figure 1 presents the overall findings on how pediatric oncologists cope with patient death using the conceptual framework adopted from Compas and colleagues (2001) and Connor-Smith and colleagues (2000). Table 2 presents engagement coping responses, themes, and subthemes, and supporting quotations to illustrate each theme. Under primary control responses, two categories emerged including (a) emotional regulation and (b) problem solving. Under the category of emotional regulation, the following themes were included: social support, with the subthemes of personal and professional support; and the theme of faith, religion, and spirituality. Under problem solving, one theme of supporting families at end of life emerged. Secondary control
responses involved (a) cognitive restructuring, with the themes of making a difference and research; and (b) distraction, with the themes of taking breaks and vacations, physical activity, hobbies and entertainment, and spending time with their own children.

Table 3 presents pediatric oncologists disengagement coping strategies, themes and subthemes with supporting quotations. Voluntary avoidance included: compartmentalization and withdrawing from families at end of life. Each category and theme is described in more detail below.
Table 2. Pediatric oncologist’s engagement coping strategies in responding to patient death.

<table>
<thead>
<tr>
<th>Control</th>
<th>Coping strategies</th>
<th>Theme</th>
<th>Subtheme</th>
<th>Supporting Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary control</td>
<td>Emotion regulation</td>
<td>Social support</td>
<td>Personal support</td>
<td>Spouse/partner</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[I talk] with my girlfriend. I think a hand or an arm or a body, it’s just that at certain points you just want love and affection. And warmth of another person, you know, that it is not wrong to grieve. I like to talk to my wife about things. I like to have... tell her about the situation and tell her as much as she can handle, about the situation... And so she provides a bit of a different aspect... and she of course gets sad... but we commiserate that way. For me she’s someone I can just be myself with because with the patient or with the medical team, although you’re grieving together you may not necessarily be completely yourself, and say everything you want to say. But with your spouse you might be able to speak out loud, although a bit more and be a bit more liberal with expressing yourself. So she validates a very sad situation. I realized that I needed to stop burdening my husband with too much work stuff. And it wasn’t that I couldn’t tell him I had a really hard day, I’m feeling really sad. But I realized somehow that it was unfair to expect him to hear about all these sad situations and stories. So I think that was a change that, although in some ways, you want to be able to tell your spouse these sorts of things, I learned that it was the details weren’t really important. The important part to focus on at home, was that I needed a hug, or I needed something extra because I was feeling sad, but not to focus on the details.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family/friends</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>If I’ve had a bad day, I know I can call people and they will listen or I will make an effort to even meet me if I really need too. I think I have a good support system. No one really non-medical who I talk to about this, the only person that I actually would talk to, specifically call to talk about this, would be a friend of mine from residency who I’m very, very close to, and who’s in the pediatric world herself.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Professional support</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other physicians have been helpful when they’ll chat and those are often just curbside conversations. They’re not formal. Sometimes there will be a one-on-one debrief. If one of my patients dies, I will not infrequently bang on the door of one of my colleagues and say “do you mind if we just talk about this?” And vice versa, or just come in. And if I know that one of my colleagues has had a rough week... I’ll pop in and say “how ya doing?”</td>
</tr>
</tbody>
</table>

(Continued)
<table>
<thead>
<tr>
<th>Control</th>
<th>Coping strategies</th>
<th>Theme</th>
<th>Subtheme</th>
<th>Supporting Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Probably my colleagues who are friends. I mean that’s one of the great things about pediatric oncology. It’s a relatively small world and we all work so closely together, and thus, and everybody understands the emotional challenges are a huge part of what we do and everyone goes through it.</td>
</tr>
<tr>
<td>Social workers and nurses</td>
<td></td>
<td></td>
<td></td>
<td>The reason partly because the nurse or Social Worker is because frankly, that is the team that’s been working most closely with the family. So if there’s anybody who’s going to understand all the various interactions that have developed over the years that you’re going be able to banter with and you know reflect on and remember. I have two really good nurses where we have a really open relationship and we know who’s more attached to which patient, and then like really try to follow-up and are things okay with you, is there something we can support?</td>
</tr>
<tr>
<td>Family Doctor</td>
<td></td>
<td></td>
<td></td>
<td>I would say as well, but a little more intermittent is my family doctor. I have gone to her during times of more stress and she’s very willing to listen and support me.</td>
</tr>
<tr>
<td>Psychotherapy</td>
<td></td>
<td></td>
<td></td>
<td>As to what it was that pushed me to seeing a Psychologist as opposed to talking to my colleagues about it…I guess I, at that time, I didn’t feel like I had incredibly close relationships with any of my colleagues to the point where I could really sit down and talk about it, in that much detail. It’s a combination of factors. I’ve been in therapy because I think that every person should go have therapy. It gives you a lot to get to know yourself. I also spoke with about that it was hard to lose your patients, and my therapist told me because I always told families it is your child, but it always becomes a little my child, when I’m so much involved</td>
</tr>
<tr>
<td>Faith, Religion, Spirituality</td>
<td></td>
<td></td>
<td></td>
<td>[Religious faith helps me cope] because in my religion we believe that everyone has a predetermined course in their life. Everyone has what’s called a written, or a determined start date and stop date. And God knows when everyone’s going to die. God knows when I’m dying. God knows when everyone is dying. And we call it fate. The way people from my culture deal with death is with a lot of grief and sadness, but the one comforting phrase that it comes down to is we’re all made by God, and we’re all returning to God. … the way I use that at work is that, I make myself feel</td>
</tr>
<tr>
<td>Theme</td>
<td>Subtheme</td>
<td>Supporting Quotations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Coping strategies</td>
<td></td>
<td>better that we couldn’t have done anything to prevent this. But it doesn’t make me feel any less sad about the suffering that the parents have gone through…and also my faith asks us to stand by whoever is grieving and be with them, and not leave them alone. CERTAINLY MY RELIGION IS A BIG SOURCE OF COPING. I GROewed as a CATHOLIC GIRL. I WOulD consider myself as a Christian…a belief that there are things we cannot change and there are things beyond our horizon and with the idea that there is a God, that there is a higher power, and that sometimes even though I lack insight now, there is overall power inside that may be right, or they may be blessed nonetheless. Maybe that’s the idea that gives me peace when I am getting at my wits ends that…it’s we’ll be left with a power higher than human being. I do believe in the afterlife. I do believe in that spirituality or having a spirit that lives on after you die. I think that gives me a little bit of peace, and I feel like these children that die are in a better place. So in that sense it sort of helps me work through it a little bit… I don’t use prayer as a tool to help me cope. I don’t go to church as a tool to help me cope. It’s more of my beliefs in a greater sense that are helpful.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem Solving</td>
<td>Supporting families at end of life</td>
<td>It’s important to me as well, first of all, most often, children that will pass away, have remained in my care for quite a long time period. And there was a bond and a relationship, and I would feel, as a total failure, if I would sign off my patients at the time I have exhausted my options for cure. The holistic approach that encompasses obviously as well, when cure is not achievable …to take good care. I think even if a patient is dying, there is still a lot of good things we can try to do … how the patient is getting there, how we can prepare the family, and how we can do this absolutely.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary control</td>
<td>Cognitive restructuring</td>
<td>Making a difference</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>When you’re young, or new to the profession you want, for the most part there…you’re there to change the world. You’re go get it right! And you’re going to stamp out disease… And so when you get these losses, while still part of the battle, after a while you realize that twenty years later, you’re still losing against cancer. Sometimes you have to be careful ’cause that doesn’t feel very reassuring. So that’s when I kind of have to have a mind warp, and look back and say, “okay, we are getting better.” …. You make a difference on an everyday basis and at this level you hope you’re making a difference in a big way.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Coping strategies</td>
<td>Theme</td>
<td>Subtheme</td>
<td>Supporting Quotations</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------</td>
<td>-------</td>
<td>----------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>You do something here, you’re doing your work and you get an email from someone you’ve never heard of…and don’t know sending this from four thousand miles away…they actually make a difference. I don’t think you go into doing this kind of thing for that reason, but it’s a nice one.</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td></td>
<td>I have had so many [patient] deaths in my life that at a certain point I try to step out of it a little bit more…. And when it was draining me I thought I have to put my energy in a new drug or a new study, or what have you, instead of going to funerals, and what have you. What I’ve developed here with my colleagues is everyone’s involved in some research to make sure that we have this sort of complex where we live the day to day with the patient but we also prepare the future with our research. And even if we do not always apply the future of today, we can leave with some hope and this is very important for every one of us just to figure out what, even if we don’t, win the battle today, we are doing everything we can to win the battle in the future.</td>
</tr>
<tr>
<td>Distraction</td>
<td>Breaks/vacations</td>
<td></td>
<td></td>
<td>Taking regular vacations and breaks</td>
</tr>
<tr>
<td>Physical activity</td>
<td></td>
<td></td>
<td></td>
<td>Physical activity (i.e., walking, yoga, running, bike riding, hiking in nature, dancing)</td>
</tr>
<tr>
<td>Hobbies and entertainment</td>
<td></td>
<td></td>
<td></td>
<td>Movies, watching TV, painting, volunteering</td>
</tr>
<tr>
<td>Spending time with kids</td>
<td></td>
<td></td>
<td></td>
<td>I think it’s very therapeutic to take my son to the park, and run it out and, and that sort of thing. So, I do though that, the distraction of being busy at home is, is helpful. And not in sort of a negative, forget about it, sort of a way…but really in more of a like, I think that those are the moments that matter, even if your kids are driving you nuts and, you know…you want to pull all your hair out, it’s still life affirming.</td>
</tr>
</tbody>
</table>
Table 3. Pediatric oncologist’s disengagement coping strategies in responding to patient death.

<table>
<thead>
<tr>
<th>Coping strategies</th>
<th>Theme</th>
<th>Supporting Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary avoidance</td>
<td>Compartmentalization</td>
<td>You go and see a family on the ward. You go and you explain what the scan is, the family is delighted, they happy, they cry, and it’s fantastic. You leave the room and you have a big smile on your face, and suddenly, you come across another family, they are looking after their child who is dying and say, “Gosh, why do I smile now?” And you know, you have to be in control of yourself. So that’s very important to make sure you are in this capacity to change, to switch from one situation to another very quickly sometimes. Switching your brain is also just moving from being a doctor to be a human being and, and to [clears throat] just keep a sort of private guard for your personal life and sometimes it’s quite challenging. It’s difficult. You cannot forget what you, what you live on a daily basis. It remains painful … you learn to compartmentalize better that this pain, while you experience that this is painful, you can better distinguish once you become more experienced that this pain relates to this family and not to yourself, and while you regret that this family’s experience… my rule is not to, not to mix it up with my own experiences, but leave it to them and allow them to be, a, bridge or a help to guide it in the right directions. I have a good switch on and off, and I kind of… I think so. (pause) Because I think I can say “Okay, this is not a time for this.”</td>
</tr>
<tr>
<td>Withdrawing from</td>
<td></td>
<td>The last patient I was talking about has a sort of incurable disease, I do find that the days that she’s coming in to clinic, I’m a little bit more anxious. I’d rather not see her. I’d rather not come to clinic and face it. You know, so I do, I guess withdraw a little bit. I feel myself withdrawing for sure [when patients are dying]. I feel myself withdrawing but I force myself… I don’t feel like I back away, but it’s a major… it’s effort, it’s hard, I want to avoid. I do want to avoid… but I know it’s not the right thing to do. You have to find for yourself coping mechanisms, and I think everyone is really different. I think you have to be really honest to yourself and sometimes remove yourself if you’re too emotionally involved. You have to say maybe the next conversation if you have to do so many in row or so, you need someone else to, to step in or so. I think you have to also have the responsibility to protect yourself but then also clearly communicate this where it’s just too much. In certain weeks, I cannot do another disclosure because it was already… I’ve been so emotional.</td>
</tr>
</tbody>
</table>
Engagement coping: Primary control responses

Emotion regulation
This refers to coping strategies that help regulate emotional distress. For the pediatric oncologists, emotional regulation meant turning to social support and to religion to help manage and soothe feelings of grief and sadness when patients died.

Personal support refers to the support accessed from family, friends, and community. For pediatric oncologists, social support was complicated by what some described as the “emotional heaviness” of their work. While many yearned for social support and a place to talk about the patients that were dying, or who had died, some described the need to curb these types of conversations in order to avoid burdening people who did not want to hear these sad stories. One oncologist remarked,

You cannot talk to other people [about this]. Even my very good friends, they know what I do but, would I confront them with it? … They all think you are crazy. You are nuts. Because people will not understand, and the usual responses when you say you are a pediatric oncologist is "Oh, how can you do it?"

Other oncologists corroborated this phenomenon of others not wanting to hear about their work and/or implying that there was something strange or weird about their ability to work with sick and dying children, implying that they were odd because they were able to do this emotionally difficult work. On this, another oncologist explained,

I had another mother say, 'What do you do?' and I said, 'I'm a pediatric oncologist.' [Her response was] 'Oh! I'm a head-in-the-sand kind of person when it comes [to] that sort of thing.' So I don't know how much more direct people can be, right? I don't want to hear about it.

Because of these uncomfortable interactions with others, pediatric oncologists had a limited number of people they could turn to for social support in the personal domain. When they did talk to someone about patient death it was either with a romantic partner, a family member, or a friend. Each of these themes is subsequently described in more detail.

One of the main places pediatric oncologists turned to for social support when a patient died, or was in the process of dying, was their spouse or romantic partner. Oncologists described their partner as being empathic listeners who validated their sadness and grief over the patient who died, and who provided physical comfort through hugs, warmth, and affection. While pediatric oncologists described their partner as being a particularly effective source of social support, some also described their ambivalence about burdening their partner with these sad stories and chose to seek support elsewhere or to limit how much they discussed these cases at home.

Pediatric oncologists also named family and friends as sources of social support when patients died, although oncologists noted that this was rare, because as with
their partners, they felt it was too much of an emotional burden on them to talk about children who were dying. When oncologists did talk to a friend or family member, it was often someone who was also a medical professional who could understand this type of work context.

Professional support refers to sources of support accessed in the professional domain that can include colleagues and other medical professionals. Pediatric oncology is a specialty that has a number of different practice models. At the study sites that oncologists were recruited, some subspecialties had a team model approach where all oncologists saw all patients and their families, while other sites or subspecialties worked on a one-on-one model where each oncologist had their own patients and families they looked after. In general, pediatric oncologists who worked with the team model approach noted that the group practice model was a robust source of professional support for them in that they had more colleagues to talk to about a patient who died (because the entire healthcare team knew the child and the family), had less of a sense of individual responsibility for the child’s death (because all the oncologists in the practice had input in their medical care), and felt supported in their grief when the patient died. On this, one oncologist explained,

The thing that’s made the biggest difference in my life is having a team approach so that I can share the burden … I find that teamwork really helps with these patients, so that you’re not the only one dealing with the stress, and the sadness. In addition to the team support structure, pediatric oncologists also named other sources of professional support that they turned to cope with the death of their patients.

Some pediatric oncologists turned to other pediatric oncologists to talk about their emotions over patient death. While ‘morbidity and mortality’ rounds and conversations about treatment decisions and medical complexities among the healthcare team were common among pediatric oncologists, the conversations about the emotional aspects of coping with patient death were rarer in this context. Emotion focused conversations tended to be shorter and more informal, happening ‘after hours’ at the end of the day, or spontaneously in the hallway, or over lunch. Some oncologists noted that these conversations were infrequent because of time constraints and because of the overall emotional burden of this type of work that made it more difficult to discuss with other oncologists. On this, one oncologist explained:

Why we’re not talking to each other more about it? I wonder if we were just so consumed with our own grief that we don’t feel like we have a piece of ourselves to give to others. … Because, it’s almost like this weight that you carry on your shoulders. I wonder whether you just feel like you can’t share that weight with somebody else partly because you’re so burdened by it… You almost don’t want to burden others with the grief that you carry.

Pediatric oncologists also turned to the social workers and the nurses on their healthcare team to talk about patient death. These colleagues knew the patient and the family well because of the extensive interactions with them throughout the
child’s treatment and end of life trajectory. As such, the oncologist explained that these conversations were particularly empathic and helpful sources of professional support and helped in coping with a patient death.

A few oncologists reported that their family doctor was a source of emotional support for them when they were under stress and this included talking to them about the difficulties of coping with patient death.

A few oncologists described seeking professional help in the form of psychotherapy to cope with patient death. For some, this was the only place they felt comfortable talking about their experiences of patient loss, and for others, it was one additional source of support they turned to if they needed it.

Most of the pediatric oncologists in our study were not religious, but many talked about faith and spirituality as helping them cope with patient death. Oncologists spoke about believing in an afterlife or that death was not the “final stop” for the child; believing that the death of the child was predestined and in Gods’ hands, and therefore, feeling relief in the sense that as physicians, they were limited in what they could do to change the ultimate outcome of a fatal disease; believing that the child’s suffering was not in vain, and that there was a higher purpose to the child’s death; and finally, that there was a higher power that looked after the child when they died. While some pediatric oncologists discussed religious observance rituals as being helpful (i.e., prayers, church attendance) as coping strategies, and some spoke about taking lessons about death and dying from their respective faiths (i.e., Hinduism, Judaism, Christianity), the majority who turned to faith as a coping strategy took comfort in the spiritual beliefs described earlier rather than in religious rituals or actions.

**Problem solving**

This refer to actions taken toward ameliorating the problem that is causing the stressor. In the case of dying children, there is no way to solve the problem in the traditional sense of the word. That is, there is no practical way to solve the problem of grief since it’s not a situation that can be remedied with a practical solution. Pediatric oncologists, however, noted that supporting families at end of life, and/or being actively engaged in the care of the dying child and their families, helped them cope with the sadness inherent in the pending death and after the child died.

Pediatric oncologists described coping with pending patient death by focusing wholeheartedly on providing the best possible end of life care they could give to their patients and their families. This included being as present as possible with the family, ensuring that the child was not suffering, and making sure that the family members received all the support they could get at this difficult time. For pediatric oncologists, providing optimal end of life care is considered to be an integral
part of their jobs. In this sense, providing the best care possible allowed them to cope with the eventual death of the child.

**Engagement coping: Secondary control responses**

**Cognitive restructuring**

Cognitive restructuring refers to the act of reframing the stressor in a more adaptive and positive light. In the case of the oncologists, focusing on making a difference and focusing on research were two coping strategies that allowed the oncologists to reframe some of the difficult aspects of their jobs.

This coping strategy involved the hope to make a positive difference in the lives of the children and their families in their day-to-day interactions. In response to patient deaths, some oncologists felt a sense of grief and despondency at being unable to cure these children (Granek et al., 2015). At these difficult moments, the focus on what they were able to do for the patients while they were alive was a coping strategy that helped them continue with their work.

Focusing on research was another positive coping strategy used by pediatric oncologists. Focusing on research had a dual function of both giving meaning and hope that this work could potentially prevent children from dying in the future, and in the second instance, the ability to turn to research gave the pediatric oncologist a break from their demanding clinical care and dying patients. The ability to turn to research was more prevalent in the group model practice since this structure allowed pediatric oncologists to have protected time for research. While clinical care of all patients is provided by one oncologist for a certain time period of the year within a rotation schedule, other pediatric oncologists on the team have the opportunity to focus on research and administration.

**Distraction**

Distraction involves actions or thoughts that take one’s mind off of the stressor. For the pediatric oncologists, distraction included taking breaks and vacations, participating in physical activities, taking time out for hobbies and entertainment, and spending time with their own kids.

Oncologists noted that taking breaks and vacations was essential in coping with frequent patient death. Although it was difficult to take time off because of heavy work load and sense of responsibility towards patients and families, it was noted that this was an essential component in maintaining emotional balance when coping with patient death.

For pediatric oncologists, physical activity was an important coping strategy to ‘let off steam’ and to ameliorate the emotional pain of patient death. This included regular exercise such as running, biking, yoga, as well as other vigorous activities such as hiking, dancing, and other opportunities to move.
Hobbies and entertainment included activities such as movies, television, painting, and other activities that functioned to give the oncologists a mental break from their work.

Spending time with one’s own children was described as an effective coping strategy to take their mind off from work and to be in the ‘here and now’.

**Disengagement coping**

Voluntary avoidance is a disengagement coping response that involves a conscious act to physically, emotionally, or psychologically remove oneself from a stressful situation in order to cope. In the context of pediatric oncologists, compartmentalization (mental/emotional disengagement), and withdrawing from families at end of life were disengagement strategies used to cope with patient death.

Many pediatric oncologists referred to compartmentalization as an active coping strategy in dealing with patient death in the day-to-day, and as an overall coping strategy in their careers. Compartmentalization, in this context, refers to the ability to actively and consciously put boundaries around emotionally distressing experiences such as patient death in order to be able to continue to be effective at their work. This coping strategy was also described as a ‘survival mechanism’ that allowed oncologists to become close enough to patients and families (which gave meaning, satisfaction, and purpose to their work), while also retaining enough distance that patient death did not overwhelm them emotionally.

For many of the pediatric oncologists, providing the patient and their family with the best possible end of life care was an active coping strategy that helped them cope with the impending loss. In some cases, however, pediatric oncologists described the desire or the need, to withdraw from patients and families as a coping strategy when it became too emotionally overwhelming to bear. As the rich quotes in Table 3 illustrate, for some of the oncologists, there was a struggle between the impulse to withdraw from the situation when the grief was too intense, and the knowledge that this was not an appropriate response to the situation. In some instances, oncologists described the need to take a break by withdrawing physically or emotionally by relying on another colleague to help with difficult aspects of the work such as having difficult conversations about poor prognoses, and/or by spending time with dying children and their families.

**Discussion**

This study aimed to expand our knowledge of how pediatric oncologists cope with patient deaths. Our inquiry was guided by a conceptual model of coping developed by Compas and colleagues (2001) and Connor-Smith and colleagues (2000) to understand how individuals manage life stressors. The emerging data are unique from the empirical, theoretical and clinical perspectives. The fit between the themes that emerged from our grounded theory analysis and the theoretical model of coping was robust, and expands the applicability of the
conceptual model to the population of grieving healthcare providers in general, and specifically to pediatric oncologists. As hypothesized in Compas and colleagues’ (2001) and Connor-Smith and colleagues’ (2000) model, pediatric oncologists used engagement and disengagement coping strategies with primary and secondary responses. As examples of engagement coping, they used strategies such as emotional regulation (i.e., social support and religion), problem solving (i.e., supporting families at end of life), cognitive restructuring (i.e., making a difference and research), and distraction (i.e., breaks, physical activity, hobbies and entertainment, spending time with kids). Their use of disengagement coping strategies included voluntary avoidance (i.e., compartmentalization and withdrawing from families at end of life).

Some of these findings are corroborated by other research in the field on healthcare professionals. For example, social support has been reported as a coping strategy in other research looking at pediatric oncology personnel including physicians, nurses, and social workers (Fanos, 2007; Papadatou et al., 2001; Sternmarker et al., 2010). Our analysis, however, goes beyond framing pediatric oncologists coping conceptually and confirming social support as an important coping strategy. The findings of this study identified possible mechanisms by which social support may be difficult for pediatric oncologists to access within their personal or professional networks due to the highly emotional and sensitive nature of this type of death. By differentiating between different types of personal and professional support, and more important, the reasons why some support is more useful than others, the nuanced findings explained why pediatric oncologists would (or would not) turn to a spouse, a friend, nurse, a social worker, or a pediatric oncologist colleague and so on. The study findings illustrate the complex personal and professional decisions that oncologists make around where, and when to seek support. As discussed in more detail below, this information has clinical implications for designing supports for pediatric oncologists within the healthcare system. Lastly, unlike adult oncologists who described withdrawing from the patients and their families at end of life as one way in which they cope with the pain of patient death (Granek, Mazzotta, Tozer, & Krzyzanowska, 2013), in this study we found that pediatric oncologists consider caring for patients and their families at end of life as an integral part of their work. While taking care of patients at this stage in their cancer trajectory can be highly stressful (leading to compartmentalizing and withdrawing from families), this engagement also proved to be a valuable strategy for coping with grief. Thus, these findings unearthed the complexity of the experience of treating children who die. Pediatric oncologists recognize this part of the work as a major personal coping challenge, however, they not only feel responsible and want to be there for their patient and their families when the child is dying, they experience that being there for others helps them cope with their own feelings of grief.
Clinical implications

This research has several important clinical implications. First, the findings on social support indicate that (a) pediatric oncologists struggle to find sources of social support after a patient dies in both their personal and professional spheres; (b) the healthcare team approach in pediatric oncology may be an effective institutional structure that can assist healthcare professionals and pediatric oncologists, in particular, in coping with patient death; (c) conducting research provides pediatric oncologists with distance from clinical work and opportunities to make a difference with research activities that may eventually benefit children with cancer; and (d) caring for dying children is both a challenge for coping and an active coping strategy for pediatric oncologists.

Given that pediatric oncologists reported that talking about patient death may be an emotional burden on spouses, family, and friends, and in some cases, other colleagues, institutional interventions that focus on helping oncologists deal with patient death may be helpful. Research on other healthcare professionals (i.e., nurses, social workers, palliative care physicians, general practitioners) has indicated that when it comes to coping with patient death, debriefing sessions (Granek, Mazzotta, Tozer, & Krzyzanowska, 2012; Keene, Hutton, Hall, & Rushton, 2010), day-long retreat workshops (Fitch, Matyas, & Robinette, 2006; Hinds et al., 1994; Serwint et al., 2002), educational sessions on coping (Eagle, Creel, & Alexandrov, 2012; Rushton et al., 2006), and week-long residential programs (Rushton et al., 2009) have shown some effectiveness. These studies indicated that while the healthcare professionals reported that the interventions were helpful (i.e., Fitch et al., 2006; Keene et al., 2010; Serwint et al., 2002), the studies that measured outcomes such as burnout, perceived stress, and grief showed no difference pre- and post the intervention (Eagle et al., 2012; Hinds et al., 1994). Systematic, controlled evaluations of these interventions are lacking. Thus, further research is needed on how best to incorporate these interventions in the pediatric oncology context in order to reduce grief burden and avoid a prevalent condition of burnout in this group of physicians.

The findings on how conducting research helps oncologists cope with patient death also have clinical implications. As with social support, the oncologists in the study noted that when they were involved in research, this activity gave them both a break from clinical care and exposure to patient death. The ability to focus on research gave meaning and hope to their work with the knowledge that this work may contribute to improving or prolonging patients’ lives, or even prevent pediatric patient death in the future. These findings, as well as the reported need of pediatric oncologists to focus on making a difference in their patients’ lives suggest that the time and space to focus on research or academic activities, in addition to patient care are vital in helping them cope with patient death.
Limitations

The findings from this research are limited to two resource rich Canadian academic centers. Further research is needed to examine the prevalence of these coping strategies in pediatric oncologists in different types of centers and in different countries where the healthcare model and the resources available to pediatric oncologists differ. Moreover, while the aim of qualitative research is to gain an in-depth understanding of a phenomenon that has not been studied extensively before, our findings suggest a number of intriguing new questions that require further study. The findings from this research may be used to examine the most effective interventions to assist pediatric oncologists with patient death including how institutional structures such as practice models may affect how oncologists cope with patient death.

Conclusions

Given the chronic nature of patient death in pediatric oncology and the emotionally difficult nature of this work, medical institutions such as hospitals have a responsibility to assist pediatric oncologists in coping with this challenging aspect of their work. Future research is needed to evaluate how best to implement these changes on the institutional level to help oncologists cope with patient death and the impact of using these strategies on their quality of life.

Funding

This research was funded by the Pediatric Oncology Group of Ontario.

References


