Chapter 4
Humor with Pediatric Patients

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4.1 Introduction

Approximately, two million children are hospitalized each year in the United States, and nearly 30% of those occur within freestanding children's hospitals (Leyenaar et al., 2016). Among this group are children living with a chronic health condition who are hospitalized due to complications of their illness or for medical treatment to address disease or symptom management. Chronic pediatric conditions vary widely in severity of symptoms and effects on daily functioning as well as long-term concerns regarding morbidity and mortality. Many children and adolescents with medical conditions face a number of physical challenges including fatigue, pain, reduced or limited mobility, and cognitive impairment. Daily routines may include managing oral medications, overseeing nutritional needs, closely observing symptoms, and participating in physical, occupational, and speech therapies. Children will require outpatient appointments with pediatric subspecialists and

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those needing certain treatments (e.g., chemotherapy for cancer) may have periods of daily outpatient visits or extended inpatient hospital admissions. While the child is the primary focus of care, the condition and its management affect all family members and can be a source of stress for parents and siblings.

Pediatric patients may receive psychosocial support formally through either routine or as-needed referrals. Psychosocial teams may consist of social workers, psychologists, psychiatrists, child life specialists, clowns, and other recreational (e.g., art, music) therapists. These providers are often embedded within pediatric hospital settings and are present to provide psychoeducation, general support, or more targeted therapeutic interventions to patients and their families. These providers address psychosocial concerns including difficulties adjusting to illness, preexisting or acute emotional or behavioral health challenges, and poor treatment adherence. When psychotherapy is indicated, pediatric psychologists typically draw from evidenced-based treatment modalities (Wu et al., 2014) with Cognitive Behavioral Therapy (CBT) being a commonly applied intervention. Children also benefit from support received through other relationships with nurses, physicians, and other providers (e.g., physical therapists). Even non-clinical staff such as administrative assistants and other essential staff (e.g., housekeeping, maintenance) have opportunities to interact in positive and supportive ways to patients and their families as they travel around the hospital milieu.

4.1.1 The Use of Humor in Pediatric Populations

The Association for Applied and Therapeutic Humor describes the intent of therapeutic humor as "a playful discovery, expression or appreciation of the absurdity or incongruity of life's situations" (aath.org). This definition is compatible with components of CBT, including the use of humorous approaches in Socratic dialogues (Friedberg & McClure, 2015). Furthermore, soliciting worst-case scenarios in an effort to work on decatastrophizing or to propose an exposure exercise can sometimes result in the child realizing their thoughts are so extreme that they are absurd or comical and can elicit some humorous relief in session. While having a serious illness is no laughing matter, the topics of humor and medicine have been paired together for centuries. Humor itself has several components, including a "physiological response (laughter), emotional response (mirth) and/or cognitive response (understanding)" (Sultanoff, 2013 as cited in Dionigi and Canestrari, 2018, p. 2).

The view that laughter and humor have physiological benefits for healthy and ill individuals has been well accepted for many centuries. With regard to theoretical frameworks on the impact of humor on pain (Pérez-Aranda et al., 2018), researchers have come up with a few theories: (1) humor offers a distraction that takes away from the body's pain response (Auerbach et al., 2014); (2) humor aids in cognitive re-appraisal (Kuiper, 2012); and (3) humor provides connections with others (Bell et al., 1986; Sturgeon & Zautra, 2016). In pediatric populations specifically, humor

promotes a sense of dignity and normalcy in "dignity robbing conditions" (Francis et al., 1999).

Additionally, there are both historical and cultural references to the use of humor as a potential salve for physical symptoms. Savage et al. (2017) highlight several historical examples describing the use of humor as a medical intervention including Greek physicians who prescribed visits to the hall of comedians for the ill and Native American medicine men who included the use of clowns in their healing approaches. In more recent times, the use of humor to support ill children was popularized by the 1998 film, *Patch Adams*, which was inspired by the real-life story of Dr. Hunter Doherty Adams. Dr. Adams, an American physician, advocates for humor and play as an important element of medical care and connecting with young patients.

Humor and laughter are linked to physical and mental health promotion in these historical references and anecdotally, but researchers have also demonstrated this phenomenon in experimental and laboratory-based studies. Much of the available research stems from studies with adults. Physical benefits described with adult populations include positive effects on the cardiovascular, muscular, respiratory, endocrine, immune, central nervous as well as pain management (Louie et al., 2014; Mora-Ripoll, 2011; Pérez-Aranda et al., 2018).

Fewer studies have addressed the positive physiological effects of laughter and humor for children. However, several studies involving children with medical conditions have addressed common areas of symptom burden such as anxiety, stress, low mood, fatigue, and pain. Within this literature, many studies highlight the benefits of medical clowns who are trained professional performers. Their goal is to use different creative arts mediums (physical comedy, magic, music, etc.) related to medical procedures and medical equipment to decrease procedural-based fear and promote coping, laughter, and mirth during medical events (Stephson, 2017). Otherwise known as "therapeutic clowns" or "clown doctors," they began to more formally establish themselves in hospitals during the late 1980s (Dionigi et al., 2012) and are now commonly integrated within pediatric hospital settings. The positive effects of therapeutic medical clowning are well-documented and much of this work highlights the benefits of clowning for anxiety and pain (Sridharan & Sivaramakrishnan, 2016). For example, in samples of children preparing for surgery, clowning has been demonstrated to reduce preoperative anxiety more effectively than medication and interventions led by clowns have led to increased pain tolerance in children, though this may be via the more direct impact on stress and anxiety (Pérez-Aranda et al., 2018). Additionally, Stuber et al. (2009) found that tolerance for a moderately painful stimulus (the cold pressor task) increased when children were exposed to humorous videos. In a study involving children admitted to an inpatient hospital setting in Columbia, researchers found that salivary cortisol levels, a biological marker of stress, were lower for children who were exposed to a humor intervention when compared to those who were not (Sánchez et al., 2017).

4.2 Assessment of Humor in Pediatric Patients

The way in which patients respond to and use humor depends on a variety of factors. Individual personality traits as well as cultural factors play a role in how individuals will use humor as a coping skill during a stressful situation. In the case of patients with chronic medical conditions, factors such as diagnosis, prognosis, and side effects from the disease or medication may influence openness to humor. All of these factors are important to assess in order to successfully use humor to build rapport or as a stand-alone intervention.

4.2.1 Cultural Factors

An individual's cultural background may impact their perception of what is funny and when humor is appropriate or inappropriate. For example, research has shown that individuals from Eastern cultures are less likely to use humor as a coping strategy than individuals from Western cultures (Jiang et al., 2019) and some research suggests that individuals from the northern United States are more likely to use sarcasm than individuals from the southern United States (Dress et al., 2008). When assessing cultural differences in the use of humor, it is important to consider a broad definition of culture, including consideration of the patient's place of origin, race and ethnicity, and religious beliefs. See Table 4.1 for expert ideas.

4.2.1.1 Humor Assessment in Action: Case Example in Cultural Context

Josiah*, a 14-year-old patient with sickle cell disease, was referred to psychology for concerns with adjustment following bone marrow transplant. While Josiah was born in the United States, his parents were originally from Nigeria and had a different perception of humor. For example, Josiah described his parents as being more serious and noted that there were many references that this patient understood from growing up in the United States that influenced the content of his humor that his parents weren't aware of. For example, Josiah loved rap music and wrote his own

Table 4.1 Expert ideas: cultural assessment of humor questions

1. Was the patient born in the United States or a different country? (a) If born outside of the United States, what is their immigration history? (b) If born outside of the United States, are they only here for medical treatment or do they live here permanently?
2. Does this patient need an interpreter to communicate with the medical team?
3. What region of the country are they from?
4. What race and ethnicity does this patient identify with?
5. What religious or spiritual beliefs does this patient have?

songs based on popular beats, many of which contained funny lyrics or situations. Although his parents did not understand this creative outlet, the clinician's receptivity regarding his music allowed them to develop rapport and use this medium as an outlet for his feelings later on in therapy. Knowing the differences between Josiah and his parents' perception of humor allowed the clinician to change style when communicating with Josiah's parents by commenting on shared situations in the moment, such as laughing about the struggles of parenting a teenager or sharing a smile with parents when the clinician and parents were both out of touch with Josiah's interests. By changing styles to meet everyone's needs, the clinician was able to enhance the therapeutic relationship with both the patient and his parents.

It is also important to consider how a clinician's personal background may influence experience of humor. For some clinicians, bringing humor into a session with a patient may feel natural while others may feel reluctant to share their sense of humor in a professional setting. By assessing one's own use of humor, clinicians can understand how to best bring their unique style into a session, for example, by considering how they have used humor in their own lives to cope with difficult situations. See Table 4.2 for expert ideas.

When there are clear cultural differences, humor can be used as a way to bridge the gap between patients and clinicians by acknowledging that although there are differences, one can still create a connection through humor that can help to build rapport and set the groundwork for a therapeutic relationship. In fact, much of the research on the intersection between culture and humor has shown that most cultures have more similarities than differences in the ways that we perceive humor (Schermer et al., 2019). In addition to using one's own cultural background through humor to bridge any cultural differences, a more direct approach might also be appropriate. For example, asking patients and their families directly about what they think is funny and how their culture influences their perception of humor may prove helpful. Clinicians may also consider using more physical humor (e.g., making a funny face or sound, dancing to celebrate a success in treatment) when interacting with pediatric patients that speak a language that is different from their native language. Whether a clinician uses a direct or an indirect approach to assessment of cultural factors, it is always important to come from a place of genuine curiosity and interest, keeping in mind that the understanding of the patient and family's humor may evolve over time as you establish your relationship.

Table 4.2 Expert ideas: personal assessment of humor

1.	How comfortable do I feel using humor in my interactions with patients?
2.	How have I used humor to cope with challenging situations?
3.	What things do I find funny that may not be funny to others who do not share my background?
4.	Is there something uniquely funny about my own culture/upbringing that I could bring into my interactions with this patient?

4.2.2 Individual Factors

There are a number of individual factors that may influence perception of humor in pediatric patients. Some of these factors such as individual personality characteristics and developmental level are true for all children. However, other factors such as diagnosis, prognosis, and current symptoms are unique to this population. One question to consider when assessing humor perception in pediatric patients is when they received the diagnosis. Most patients upon hearing the news that they have been diagnosed with a chronic health condition will likely need some time to adjust and may find jokes and humor insensitive. Another consideration is the nature of the diagnosis. Is this condition something that requires intensive medical intervention? Will the patient's lifestyle be disrupted significantly? Is the disease life-threatening? All of these factors may influence the ways in which a provider may use humor as well as what topics may be sensitive to individual patients because of their diagnosis and the associated complications.

For example, some patients may experience pain due to their condition or may not be alert at all times due to lack of sleep or medication. When patients are experiencing painful complications, they may not be as open to humor as when they are feeling better physically. Assessment of the appropriateness of humor should include consideration of a patient's current medical status. Additional care and sensitivity must be taken for children at end of life. However, studies show that humor can be a useful tool in palliative care in increasing pain tolerance, life-satisfaction, and improving physical and psychological well-being (Linge-Dahl et al., 2018).

4.2.3 Methods for Assessing Humor

Humor assessment will likely look different depending on the pediatric patient population and setting. Formal measures are an option for clinicians when there is ample time or clinicians wish to get an in-depth assessment of humor. For a list of formal measures for assessing humor, please see Table 4.3.

For many pediatric settings, a more informal measure may be more appropriate. For example, in one study, researchers assessed humor by asking participants to write captions for single panel cartoons, add a funny conclusion to a joke, and to include a funny definition for an odd noun-noun pair such as "yoga bank" and "cereal bus" (Nusbaum et al., 2017). This technique could easily be translated when working with pediatric patients as a way to build rapport and learn more about a child's sense of humor. Other informal methods could include using trial and error to see whether a patient responds to a funny prompt. For example, a clinician can blow up a glove with air and place it on their head to see whether they can make a young child laugh during a procedure. If the child laughs or smiles, then the clinician can determine that physical humor is a method that can be used in the future

Table 4.3 Expert ideas: formal measures for assessing humor

Measure	Description	Citations
Humor styles questionnaire	Assesses four different dimensions relating to individual differences in the use of humor; validated in children 11 and older	Fox et al. (2013); Martin et al. (2003)
Humor in our household questionnaire	Asks respondents to answer questions about humor individually and then share with their family members	Eckstein et al. (2003)
State trait cheerfulness inventory	Assesses humor among different mood states including cheerfulness, seriousness, and bad mood; includes parent report	Hofmann et al. (2018)

with this patient. A sample humor assessment measure is included (Fig. 4.1) for review.

Clinicians will also want to continuously assess humor during conversations with patients by paying attention to patient's comments about humor. During the course of treatment for a chronic health condition, a patient may express cognitive distortions around their ability to make jokes or participate in humor that might be appropriate targets for intervention. For example, a patient might say, "My life is miserable. There is absolutely nothing to laugh about." A patient who makes this statement may benefit from introducing cognitive reframing to help change his thoughts to be more accurate. By incorporating humor assessment into a clinician's regular assessment process, clinicians can be better equipped to notice what role humor is playing as well as any opportunities to increase laughter into the patient's life.

Depending on the setting, there may be several psychosocial staff members who are able to carry out a humor assessment. For example, in some outpatient clinics, social workers conduct routine psychosocial assessments for new patients and may be able to incorporate questions about humor into this assessment. Psychologists may use a humor assessment with a new patient referral as a way to build rapport and better understand what techniques may work best. Child Life Specialists, who routinely work with children during medical procedures, may want to ask these questions as a way to understand what might help to increase distraction during a blood draw or finger stick.

Overall, humor assessment in pediatric patients is an important step for better understanding the whole patient. No matter what method is chosen, communication among the interdisciplinary team as to what elicits humor for individual patients and families can improve patient relationships with staff and consequently improve patient care.

Questions for Children	
1.	What is something that makes you laugh?
2.	What is a funny television show you like to watch? Tell me something funny that happened in the show.
3.	What is your favorite funny book? Tell me something funny that happened in the book.
4.	Do you know any silly songs? Can you sing it to me?
5.	Tell me about something funny that happened at school.
6.	Who is the funniest person in your family? Tell me something funny that they did.
7.	Do you know any funny jokes?
Questions for Adolescents	
1.	What is something that makes you laugh?
2.	What is something different about you, your family, or your culture that you think other people would find funny?
3.	How does your culture influence what you think is funny?
4.	Tell me about a funny video or meme that you saw recently.
5.	What is an inside joke that you have in your friend group?
6.	Who is your funniest friend?
7.	Do you ever laugh at yourself?
Humor Prompts	
Make a funny face	Make a silly noise
Wear a funny costume	Watch a funny video
Tell a knock-knock joke	Use medical equipment in a funny way
Observe a child during a clown performance	Play a game of charades where you act out funny characters

Dowling, J.S. (2002). Humor: A coping strategy for pediatric patients. *Pediatric Nursing*, *28*(2).

Fig. 4.1 Humor assessment measure for pediatric patients. Dowling, J.S. (2002). Humor: A coping strategy for pediatric patients. *Pediatric Nursing*, *28*(2)

4.3 Clinical Applications of Humor with Pediatric Patients

Humor interventions have been used in pediatric settings as a complementary intervention and as a therapeutic tool with approaches ranging from therapeutic clowning, magic tricks, strategies for distraction and coping facilitated in collaboration with child life specialists, and creative activities via "artists-in-residence" programs (Bennett et al., 2014; McMahan, 2008). With these approaches integrated in already existing, evidence-based therapies, they promote relaxation and coping with hospitalization, (Consoli et al., 2018), anxiety reduction prior to procedures and medical interventions (Sridharan & Sivaramakrishnan, 2016), and coping with chronic illness management.

4.3.1 Hospital Programs and Staff that Promote Humor

4.3.1.1 Therapeutic Clowning and Magic

> Clowns don't belong in hospitals…Neither do children.- Michael Christensen, Big Apple Circus Clown Care Unit

> The role of a clown and a physician are the same—it's to elevate the possible and to relieve suffering.- Patch Adams

Patch Adams, a medical doctor himself, believes in the importance of a hospital community, which includes integrating humor and laughter as part of culture of medical care (Finlay et al., 2014, p. 596). Similarly, in 1986, the Big Apple Circus in New York City created one of the largest hospital programs pioneered the integration of various performance artists into hospital settings, particularly clown doctors. Since then, this community program has transformed into several free-standing organizations, the largest one being Healthy Humor (healthyhumorinc.org). Healthy Humor is a non-profit organization with performers (magicians, musicians, actors, clown doctors, etc.) trained to use their skills in a hospital environment to promote humor, play, and fun for hospitalized children and their support systems (Christensen, 2020). One of their practices includes "Clown Rounds," which mimics the medical rounds that physicians do in patient rooms as a parody to routine hospital events, such as performing "red nose transplants, kitty-cat scans, chocolate milk transfusions, and funny-bone checks" (Finlay et al., 2014, p. 601).

Therapeutic clowning can provide distraction and/or adaptation, laughter or fun, and may "demystify" medical procedures and events by bringing a sense of familiarity into a medical space (Finlay et al., 2014). Unlike clowns typically associated with circus performances, therapeutic clowns, or "clown doctors," are multi-modal and specifically trained to be mindful of the culture of the medical space, including confidentiality, training on child development, and hygiene. They present with more minimal makeup, usually keeping to funny outfits, a hat, and a traditional clown nose. They may also wear doctor's lab coats. Clowns are trained in non-confrontational approaches, knowing to respect a "no" from patients, using music to draw attention, keeping distance or avoiding eye contact at first, and approaching the child from the side or getting down to the child's height (Koller & Gryski, 2008). While there is an element of performance to a clown doctor visit, it is important to note that the goal is to empower children and give them a sense of control during a hospital stay:

> I'm not there to entertain people. Therapeutic clowning is not about the clown. It's about empowering the children. They don't have any choice over who comes in or out of their room, the doctors who care for them, the illness that they have, or the medications they take. We offer them choices. Always asking permission, we will never go into a room un-invited. If the child says, 'No, I don't want to see you today,' that's great. He can't do that with anyone else. Watson (2008), p. 179

Several children's hospitals have incorporated clown programs, such as "The Laughter League" at Boston Children's Hospital (BC Laughter League Website;

https://www.childrenshospital.org/patient-resources/family-resources/clown-care; https://laughterleague.org/).

4.3.1.2 Therapeutic Recreation, Child Life, and Creative Arts Therapies

Child life specialists are often on the "front lines" of adjustment and coping in medical settings, with their work encompassing three major tasks: promoting play and a sense of normalcy, engaging families and other support systems, and procedural preparation and coping (Child Life Council, 2006). A child life specialist may meet a child when they are first admitted to offer activities to encourage a sense of structure throughout the day and behavioral activation, such as participation in a unit-wide movie night or bingo game, providing board games to a family to pass the time, or finding ways to celebrate birthdays or commemorate loved ones while still in the hospital. They are experts in demystifying medical events via play and developmentally appropriate communication of jargon and diagnosis to patients, their families, siblings, schools, and other support systems (Beickert & Mora, 2017; Association of Child Life Professionals, 2018; Beer & Lee, 2017; Lerwick, 2016; Lookabaugh & Ballard, 2018).

While most child life specialists work in hospitals, they may also work in camps for children with chronic illness, outpatient doctor's offices, and other ambulatory care centers. Depending on a child's needs, interventions are highly developmentally considered, and may include humor, playfulness, and mirth to ensure consistency in of the largest developmental tasks of childhood: play. For example, a child life specialist may help a child prepare for chemotherapy port access or a blood draw by showing the child on a doll first. Child life is often called on for shorter-term and acute coping interventions, including teaching coping skills such as breathing techniques for relaxation, using ways to ease pain by positioning children for comfort or using adjunctive tools before a painful shot or IV placement (e.g., a bee-shaped buzzer that provides gentle vibrations around an injection site in an effort to reduce pain), and promoting the use of distraction as an evidence-based procedural pain management technique (Birnie et al., 2017; Bukola & Paula, 2017). These strategies can potentially decrease the likelihood of adverse events by unnecessarily repeating medical procedures (e.g., reinserting an IV or re-doing a blood draw, decrease in need of sedation prior to imaging). If a child has greater mental health or developmental needs that would benefit from longer term support, pediatric psychologists work in consultation with child life specialists to implement strategies for longer term coping or behavioral plans.

Creative arts therapies, such as music and art, may be seen as a less intimidating and invasive way to provide care that is supportive and may reduce distress. They have been shown to contribute to pain reduction, decreased fatigue, short-term mood improvements, stress reduction, and reduced symptomatology (Moola et al., 2020).

4.3.1.3 Psychology

Pediatric psychologists are well-positioned to utilize humor in their work with children and families. As a part of assessment, the psychologist will work to identify patterns in how the child and family may already integrate humor in their lives as well as their openness to utilizing humor as part of their adjustment and coping process. As an intervention tool, there are a few key opportunities where psychologists can use humor. First, utilizing humor as a method to connect to children can be good strategy for initiating communication, building rapport, and gaining trust in the relationship. Younger children may respond well to silly and playful interaction while connecting with adolescents may include the use of sarcasm and wit. Turning aspects of the illness or treatment on their head to highlight the shocking or ridiculous nature of some serious topics (e.g., changes in appearance, decreased independence due to needing assistance with activities of daily living) can be a strategy to acknowledge how unusual the situation must feel for the child. This strategy can validate feelings of disbelief and shock and, in turn, help the child see that the therapist "gets it."

Additionally, cognitive behavioral therapy inherently includes strategies that "pull" for humor. These may include addressing cognitive distortions via playful "thinking traps," confronting social anxiety through in-session exposures such as silly dance moves or initiating funny noises, attempting to change negative emotions through loud, boisterous singing matches with a friend, and many more. Third wave approaches such as dialectical behavior therapy also specifically utilize irreverent approaches to help patients alter their perspectives (Linehan, 1993). Clinicians who typically work from a CBT-based framework should consider how these approaches may be used from a lens of humor in an effort to build rapport and enhance coping.

4.4 Humor Interventions for Pediatric Presenting Problems

Often in pediatric settings, medical team will refer a patient who may appear depressed, sullen, and not engaging with staff during treatment, or for some behavioral concern (what a child may be doing or not doing with regard to treatment goals (Catarozoli et al., 2019). In working with youth with medical conditions, it is important to be mindful that thoughts and feelings surrounding their diagnosis and treatment (e.g., "there is no cure and I will never get better") may in fact be true. Clinicians should be mindful of when to utilize change-based CBT interventions that can incorporate humor (e.g., using medical play/exposure to lessen fear surrounding medical procedures) versus interventions that may use humor as part of acceptance (coping with the potential that a patient will have this condition for the rest of their lives). Several clinical areas ripe for humor intervention are described below, along with case examples to illustrate them in practice.

4.4.1 Psychoeducation/Rapport Building

Psychoeducation is an important component to therapeutic buy-in (Crosling et al., 2009). The use of humor can specifically help with overall comprehension and learning (Hackathorn et al., 2011), as well as decrease defensiveness, enhance therapeutic alliance, and promote trust (Hussong & Micucci, 2021). A rule of thumb when first approaching humor is to direct humor towards factors outside of the child/their family, including humor towards medical staff, treatments, or other events that may be fear-inducing for the child (McGhee & Frank, 2014, p. 161). One of the authors described working with a young client who was referred from the gastroenterology service. There was initially a lot of shame surrounding frequent loose stools. Adding fart noises at the beginning and end of each session as a "hello and goodbye" served as a way to build rapport. This intervention also created expected structure around a session through a shared ritual and took away some of the awkwardness surrounding discussing somatic symptoms by placing the conversation in a "comic frame" (Dziegielewski et al., 2003). The author assisted the patient and team with utilizing this strategy both in the therapy space and during his medical appointments. Another way to incorporate humor may be to use stool shaped emojis to do a mood or symptom check with a patient or play a song/do a dance as a child is able (Adkins, 2018; a Physician Assistant on why he dances with his patients).

4.4.1.1 Humor in Rapport Building: Case Example

Joe,* a 10-year-old Caucasian boy with new-onset diabetes, expressed self-consciousness over what other children in his class would think if his continuous glucose monitor alarmed for out-of-range blood sugar. In discussing how the alarm sounded to his new therapist, Joe thought of other sounds he could think of, from predictable sounds such as a car backing up out of a driveway, to more outlandish examples (e.g., alien spaceship landing from outer space). This discussion helped Joe's connection to his therapist and improved his level of comfort in discussing his feelings about his new diagnosis. This also introduced how to reframe negative automatic thoughts on others' perception of his diabetes management.

4.4.2 Humor as a Coping Skill

Children with a variety of health issues have reported using humor and laughter to cope. They describe strategies such as joking around, making fun of themselves and their limitations, or pranking family members (e.g., Macartney et al., 2014). Research supports a model of stress adaptation among youth with chronic illness,

using techniques such as "reappraisal, positive thinking, acceptance, or distraction" (Compas et al., 2012). Humor is also linked with resiliency in youth (Masten, 2001), which supports the idea that incorporating humor-based strategies to reframe thoughts enhances coping (Hilliard et al., 2012). This has been especially highlighted in the pediatric cancer literature where various reports have suggested that a sense of humor enhances coping and adjustment (Dowling & Hockenberry, 2003).

However, benefits of humor are not just for patients. The child's illness is a force that deeply affects parents and siblings and can cause significant distress. Children with chronic medical conditions may also note that they feel as if others treat them as "fragile" or as if they cannot make jokes around them due to the severity of their condition. Research indicates that parents and siblings find humor and laughter to be helpful when it comes to coping with a child's medical condition and that it may help families cope together. For example, qualitative work by Mangelsdorf et al. (2019) describes how one family of a child who had injured his ankle joked that after the child healed they would break his other ankle in order to keep a "handicapped card." Tasker and Stonebridge (2016) interviewed adolescent siblings of youth with cancer who reported that humor and laughter within their families was something they needed in order to cope with the stressful sides of the illness. In other work, parents of children with disabilities who endorse adaptive humor styles such as self-enhancing or affiliative humor report more positive affect and fewer symptoms of depression (Fritz, 2020). The use of humor and joking around has even been described as a strategy that parents use when their child is nearing the end of life (Darlington et al., 2021).

In clinical practice, there is often discussion and planning around a child's "coping kit," used to combat distressing emotions or thoughts. This may include activities for distraction, things that bring comfort, and relaxation. Pain and discomfort can be tied into the "feelings" part of a CBT model for youth with medical and somatic symptoms (Catarozoli et al., 2019). The "rest and digest" response is often taught in the context of relaxation skills and is a natural place to incorporate humorous techniques. For example, a patient can think of different sensory experiences related to a funny memory while doing guided imagery. Humorous anecdotes can be added to create a calming scene (e.g., one young patient imagined beach full of puppies dancing in tutus eating ice cream).

With regard to humor specifically, the idea of a "Laughter First Aid Box" (Schiffman, 2020) promotes coping with difficult medical events throughout the course of illness or a child's hospitalization. Hart and Rollins (2011) suggest similarly creating a "Mirth Aid Kit," a decorative box filled with things that make the child laugh, such as funny cards, comic strips, toys, jokes, and other items. We have created a worksheet (Fig. 4.2) with suggestions for a coping kit that can completed with a therapist or sent home with a family to generate a humor-based coping list. This is meant to be customized to developmental and medical need.

4.4.2.1 Humor as a Coping Skill Case Example 1

Marissa,* a 15-year-old Caucasian female, was born with a congenital heart defect. She required placement of a pacemaker when she was quite young. In later years, she needed an emergency repair of this device, and had since struggled to feel like herself. She entered psychotherapy for support in transitioning back to school, as she felt different than other teenagers. In therapy, she often presented with questions about her identity within a friend group, issues with romantic interests, and worries

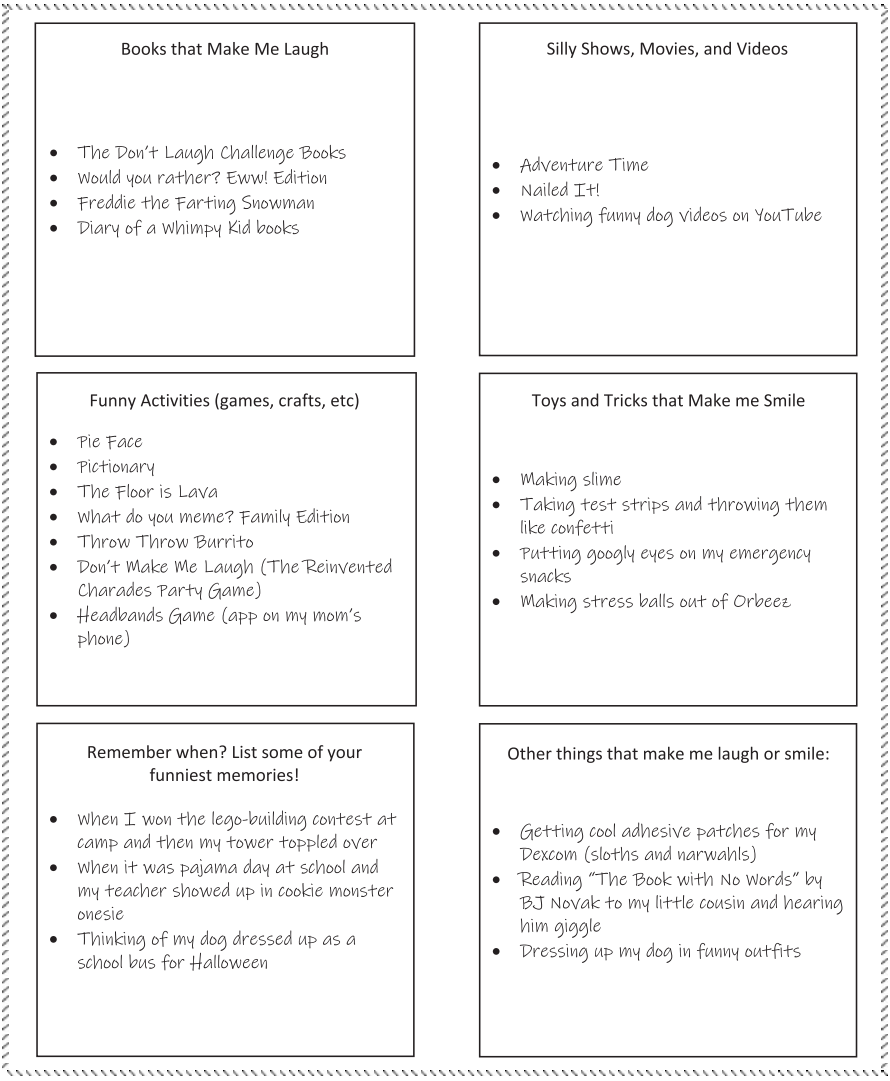

Fig. 4.2 Case Example: Joe's Humor Coping Kit! (school age child with diabetes)

surrounding school performance and career goals. Marissa sometimes struggled to put her thoughts and feelings into words and would occasionally reference a popular meme or GIF she thought encapsulated her thoughts or feelings. For example, she showed her therapist an image of Kermit the frog flailing his arms with excitement when her romantic interest sent her a text. She later elaborated that Kermit's supposed "frazzled excitement" felt as if she was potentially having an arrythmia and alarming her device, because she struggled to acknowledge how someone so reportedly attractive could potentially like her. The therapist outlined Marissa's use of humor to cope and identify the connection between her thoughts, somatic feelings, and subsequent behaviors in seeking affirmation from others as well as her own assumptions that others may treat her as "fragile" due to having a pacemaker. In subsequent sessions, Marissa's affect towards negative automatic thoughts changed; when she found herself engaging in unhelpful thoughts about what others thought of her medical condition, she would instead laugh and roll her eyes.

4.4.2.2 Humor as a Coping Skill Case Example 2

Gina,* a 13-year-old Asian-American female diagnosed with osteosarcoma, required a surgery to remove a tumor from her leg. Gina had an intellectual disability and often felt scared about working with different staff members, and multiple medical procedures she had to endure, including unexpected events that occurred in the hospital (e.g., longer chemo stays, losing her hair, needing a wound vacuum-assisted closure after her surgery to drain fluid, not returning to school in time). She was referred to psychology to give her and her family some cope-ahead skills for unexpected events, as well as to help find ways for Gina to feel more comfortable with different medical providers. To familiarize her with medical tools and give her a sense of agency over her treatment, Child Life helped Gina create her own medical toolkit, including a "play" stethoscope she would use with the doctor, a joint hammer, and a doll that had her same medical wound. She jokingly shared that she was her surgeon's assistant, and prescribed fake "prescriptions" and care instructions for the medical team. As part of rapport building with her psychologist, Gina made a "headband of the day" during which she cut out different movie characters and funny faces that she liked and stuck them on the headband or paper crown. One day, she cut out pictures of her surgeon and put them on the headband, which gave her and each staff member who came to see her that day a good laugh. This headband activity increased Gina's behavioral activation and helped her to connect with staff members with a conversation starter regarding her interests.

4.4.3 Humor in Medical Play/Exposure

In medical settings, children can encounter unfamiliar items related to medical procedures. It can be helpful to show these items in a different way to familiarize children not only with their function, but to decrease their fear surrounding the item, similar to traditional exposure therapy. In several evidence-based treatment manuals (Coping Cat, MATCH ADTC), it is emphasized that sessions should end with an activity that promotes laughter (e.g., Match ADTC celebrates successes with a "Leave 'Em Laughing" Activity) to provide reprieve, reinforcement, and levity from what is often a difficult undertaking for patients. Medical play can be used to familiarize children with common medical items, such as gauze and gloves. It can also take away the somewhat intimidating appearance of medical devices and tools. For example, a child who had an aversion to gloves made a "flower arrangement" with gloves to be put in her room; another created a "butterfly" with gauze and a band aid. A syringe can be used to squirt paint for a fun activity that promotes behavioral activation in the hospital setting, decreased anxiety over unfamiliar or scary objects, and increased familiarity with a medical tool.

4.4.3.1 Humor in Medical Play/Exposure Case Example

Riley,* a 4-year-old Caucasian male with leukemia, was referred to the psychology team after limited oral intake, resulting in a nasal-gastric tube placement for supplemental nutrition. Although Riley could still eat by mouth while this tube was in, Riley was scared to swallow with the tube due to an episode of vomiting after eating which led to the tube being dislodged. The medical team set a goal for Riley to increase his oral intake in order to remove the tube altogether; however, he was afraid of this transition due to his past experience. Child life and psychology worked together to introduce medical play with toy food, noticing which food Riley gravitated towards. The team created a picnic with these foods, and then incorporated small portions of real food alongside these foods to take small bites. This served both as a distraction and as an approach to take away some of the fear involved with eating. Reinforcement in the form of character stickers the child enjoyed was given to him, shaping reinforcement with bigger stickers after subsequent bites. Sessions were timed to coordinate with either the magician or pet therapy dog to add mirth, levity, and reinforcement after feeding sessions.

In summary, clinicians should strongly consider the utilization of humor as a primary or adjunctive intervention with pediatric patients. It can enhance therapeutic connection and rapport and optimize coping with conditions or situations that are out of the patient and family's control.

4.5 Risks and Benefits of Humor Among Medical Providers

As discussed, the use of humor as a mechanism for coping with stressful events may be of significant benefit in pediatric settings. Research has addressed the social functions of humor for staff in various settings (Astedt-Kurki & Isola, 2001;Griffiths, 1998; Sayre, 2001). Despite variability in setting and delivery, findings consistently indicate the importance of humor in improving communication, building relationships, decreasing tension and burn out, and managing emotions (Dean & Major, 2008; Mesmer-Magnus et al., 2012).

However, clinicians using this strategy with their patients may find systemic barriers within their multidisciplinary team members, the team "culture," or the clinic environment. For instance, team members may express concern that the patient, family, or provider is not taking a diagnosis seriously or may not fully understand the severity of a prognosis. They may find it uncomfortable to overhear a provider laughing with a patient or family about changes in the patient's appearance, symptoms, or "gallows humor" during a medical visit. Clinicians who are utilizing humor as a strategy for coping should consider explaining the rationale for this strategy with their team in an effort to decrease discomfort. Providing evidence on the effectiveness of humor in medical treatments and health promotion for stress reduction, pain control, and improved resiliency may prove helpful (Watson, 2011).

Medical teams may also benefit from education on the use of humor to cope and build upon their own resiliency, as humor has been shown to have a positive effect on group cohesion and may be effective in reducing stress in health care workers (Craun & Bourke, 2014; Dean & Major, 2008). However, it is also possible that the strategy could create distance and prevent more serious discussion, particularly in situations where clinicians or medical teams may be attempting to avoid the reality of a patient's diagnosis or prognosis. Further, humor can have a darker side; it can be perceived as aggressive or rude, particularly when offered at the expense of another person (Kuiper et al., 2004). Excessive use of gallows humor, in particular, has been associated with psychological distress (Moran, 2002).

4.6 Conclusion

Evidence suggests that there is an important role for humor in pediatric settings, as it may improve resiliency and coping in patients, families, and staff. There is also considerable evidence that humor may enhance positive life experiences and lead to greater psychological well-being. Clinicians in pediatric settings should strongly consider assessing for humor and utilizing it strategically to promote coping and connection. Medical teams may also benefit from the use of humor to build cohesion and manage the intensity of day-to-day work that can be emotionally challenging. Children and families facing medical conditions require psychosocial support and the opportunity to find humor in even the most scary or unfortunate of situations.

* All cases are sanitized to ensure confidentiality.

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