

## Childhood cancer and mental health

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### Overview

This fact sheet provides basic information about the links between cancer and mental health difficulties in children. It can be used as an accompaniment to the [Understanding child mental health and chronic physical conditions](#) e-learning course, which highlights the links between chronic illnesses/conditions in childhood and associated mental health difficulties.

This fact sheet covers general information about cancer, as well as details such as prevalence in Australia and the implications of the illness for children, including mental health impacts. Some content also pertains to adults.

Key points include:

- Cancer describes conditions and diseases where abnormal cells divide without control, can invade nearby tissues, and may spread to other parts of the body.
- Approximately 770 children aged 0–14 are diagnosed with cancer each year in Australia.
- Childhood cancer's physical effects and treatment can have significant impacts on quality of life and physical and mental health and wellbeing, and may reduce life expectancy.
- Support from family and health professionals can help children manage childhood cancer, enhance their quality of life, and improve their mental health and wellbeing.



### What is childhood cancer?

Cancer describes different conditions and diseases, where abnormal cells divide without control and can invade nearby tissues. Different types of cancer affect different cells, and it can spread to different parts of the body via blood and lymph systems. The way a cancer grows, the parts of the body impacted, and the extent of cancer spread is determined by cancer type and severity. Cells that lump together are called tumours, which can be benign or malignant. Malignant tumours contain cancer cells (Australian Institute of Health and Welfare [AIHW], 2019; Cancer Australia, n.d.-a). Different types of cancer behave in different ways, impact the body differently, and require different treatments or combinations of treatment.

Childhood cancer, diagnosed at age 0–14 years, is different to the type of cancer that occurs in adults (AIHW, 2012; Cancer Australia, n.d.-a; Friend, Feltbower, Hughes, Dye, & Glaser, 2018). Childhood cancers are not strongly linked to lifestyle or environmental factors like cancers in adults, they start in different parts of the body and look different at a cellular level.

Treatment of childhood cancer is different to adult cancer, and children respond differently to treatment than adults. Children may respond to treatment better than adults because:

- cancers that children have are different to adult cancers
- children may receive more intense treatments; and/or
- children may not have any other health problems or comorbidities (Cancer Australia, n.d.-a).

## What is the prevalence of childhood cancer in Australia?

During 2011–15, 35% of all childhood cancer cases were leukaemias – types of cancer that affect the blood and blood-producing tissues in the body (AIHW, 2019) – making them the most common type of cancer diagnosed in Australian children. Tumours of the central nervous systems (mainly brain tumours) are the second most common at 14% of all diagnoses in children, followed by lymphomas at 13% of diagnoses (AIHW, 2020).

Childhood cancer in 2011–15 was more prevalent in boys (55%) than girls (45%) (AIHW, 2020). Prevalence of childhood cancer was almost twice as high in children aged 0–4 years (23 per 100,000 children) than children aged 5–9 years (12 per 100,000), and 1.6 times that of children aged 10–14 (14 per 100,000) (AIHW, 2020).

### Childhood cancer in Australia

According to the Australian Childhood Cancer Registry, it is estimated that about 770 children aged 0–14 are diagnosed with cancer each year in Australia (Cancer Council Queensland, 2017).

## What are the implications of childhood cancer for the child?

Cancer symptoms in children can appear to be similar to many other medical conditions and may include:

- bruising
- lumps or swelling
- paleness
- tiredness or lethargy
- persistent pain
- movement difficulties
- fever or illness that does not resolve
- headaches
- nausea
- vomiting
- changes to vision
- balance problems, and/or
- unexplained weight loss (Cancer Australia, n.d.-a).

Three common types of cancer treatment are chemotherapy, radiation therapy and surgery. Although cancer treatment is more likely to be effective in children than adults, children are more likely to have side effects from certain types of treatment as their bodies are still growing (American Cancer Society, 2019). Some side effects may subside or even go away, but many will require ongoing visits to specialists, lifestyle changes, or even further treatment for the side effects. Cancer treatments may impact the following:

- brain development
- sensory systems
- thyroid gland
- muscles and bones
- cardiovascular system
- lungs
- teeth
- overall growth; and/or
- sexual development and fertility.

Cancer treatment sometimes also presents a risk for development of a second cancer (American Cancer Society, 2017; Cancer Council, n.d.-b). Cancer and its treatment may also impact school attendance and academic achievement (Tsimicalis, Genest & Stevens, 2018), social interactions (Cancer Institute NSW, n.d.) and participation in activities (Alizadeh Zarei, Mohammadi, Mehreban, Ansari Damavandi, & Amini, 2017).

Some children with cancer have reduced life expectancies. Cancer is reported to be the second leading cause of death in children aged 0–14 years, after injury-related deaths. During 2015–17, there were 92 cancer-related deaths a year among children aged 0–14 years, at a rate of two deaths per 100,000 (AIHW, 2020). In 2015–17, the most common cancers that caused death among children were brain cancer, acute myeloid leukaemia, and acute lymphoblastic leukaemia (AIHW, 2020).



## **What are the mental health impacts of childhood cancer?**

Children diagnosed with cancer experience a range of mental health impacts. The incidence and intensity of mental health impacts can also be influenced by the age of the child, their parents' mental health, and the type of support the child receives (Friend et al., 2018).

Research has consistently found that immediately after the diagnosis of cancer and in the months after the diagnosis, children experience increased distress, reduced quality of life, and psychosocial functioning challenges (Kazak et al., 2015). These challenges may impact on many aspects of life, including relationships, school and work (American Cancer Society, 2017).

Some post-treatment concerns that may impact immediate or long-term emotional wellbeing include:

- dealing with physical changes resulting from the cancer or treatment
- ongoing tests and check-ups
- changes to diet and activity participation
- concerns the cancer may return, or new health problems developing
- feelings of resentment for having had cancer, or having to go through treatment when others do not
- concerns about being treated differently or discriminated against by others; and
- concerns about dating, marrying, and having a family later in life (American Cancer Society, 2017).

Many survivors of childhood cancer thrive post-treatment. Over time, some childhood cancer survivors find meaning in their experience which facilitates priority setting and establishing strong personal values. For others, it remains difficult adjusting to life after cancer (American Cancer Society, 2017). It is recommended that symptoms of mental health impact are identified early, and support is accessed. Psychologists and social workers can support children early in treatment using effective interventions such as mindful-based stress reduction and cognitive-behavioural therapy (Kunin-Batson et al., 2016).

Some mental health impacts appear at least five years after the diagnosis, and can be present over 30 years after treatment has ceased. These can include:

- poor self-esteem
- depression

- anxiety
- antisocial behaviour
- post-traumatic stress disorder
- schizophrenia
- poor body image
- difficulties fulfilling expected roles
- mood swings
- oppositional defiant disorder
- drug and alcohol misuse
- suicidal ideation; and
- unmet emotional and coping needs (Cancer Australia, n.d.-b; Friend et al., 2018).

## **What impact does childhood cancer have on families?**

Following the diagnosis of a child with cancer, families may experience a time of increased distress, poorer quality of life, and difficulties in psychosocial functioning (Kazak et al., 2015). Many challenges and changes occur in the day-to-day life of the family, however there is also evidence that parents may eventually develop good coping and resilience (Kearney, Salley & Muriel, 2015).

In addition to facing uncertainty about progression of cancer, a cancer diagnosis may bring about new roles and responsibilities which caregivers may have had little experience in and may involve practical challenges such as adjustments to work and/or additional expenses (Taylor, Fradgley, Clinton-McHarg, Byrnes, & Paul, 2021; Teixeira, Applebaum, Bhatia, & Brandão, 2018). Caregivers may also experience distress, isolation and anxiety (Shokri, Tarjoman, Borji, & Solaimanizadeh, 2020; Taylor et al., 2021; Teixeira et al., 2018).

Siblings of the diagnosed child may experience more depression, anxiety and worse relationships with peers, compared with siblings who do not have a chronically ill sibling (Erker, Yan, Zhang, Bingen, Flynn, & Panepinto, 2018). Siblings are affected across different areas of their lives, including:

- emotional and behavioural functioning
- quality of life
- relationships with family members
- school attendance and performance and
- health behaviours (Long et al., 2018).

## Conclusion

Cancer can have significant implications for children's overall development and wellbeing, including ongoing mental health concerns. Early identification of these concerns and access to professional services including allied health practitioners and social workers, offers the potential to alleviate the challenges for children and their families. Further information about the impact of chronic conditions on mental health can be found within the [\*Understanding child mental health and chronic physical conditions\*](#) e-learning course.



## Where can I go for further information on childhood cancer?

### [Cancer Australia](#)

Australian government website with information about children's cancer, including a list of places to get support.

### [Consumer Involvement Toolkit](#)

Cancer Australia's toolkit helps people affected by cancer to engage with local health services and community, cancer and research organisations.

### [Cancer Council](#)

State- or territory-specific general information about cancer, including resources and support groups in local areas.

The 13 11 20 support line is available between 9 am and 5 pm Monday to Friday, connecting families with experienced cancer nurses or health professionals.

### [Children's Cancer Foundation](#)

Foundation that helps children with cancer access world-leading treatment and support. It also supports families throughout the treatment process.

### [Brainchild Foundation](#)

Charity that supports children who are affected by brain and spinal cord tumours, and their families.

### [Youth Cancer Services](#)

Provides specialist, age-specific treatment and support for young people with cancer.

### [Parenting Through Cancer](#)

Community designed by CanTeen and Camp Quality to connect parents affected by cancer, and provide support and resources to help the family's cancer journey.

### [Kids with Cancer Foundation Australia](#)

Foundation that supports children with cancer and their families with finances.

### [Leukaemia Foundation](#)

Foundation that has resources and support services for people with leukaemia and their families, occasionally providing accommodation near major hospitals.

### [Redkite](#)

Provides financial assistance, emotional support and educational assistance to children with cancer and their families. It also has scholarships available for specific educational goals.

The support line 1800 REDKITE is open between 9am and 7pm Monday to Friday.

### [Ronald McDonald House Charities](#)

Charity that provides programs including educational support and accommodation near treatment centres.

### [Starlight Children's Foundation](#)

Foundation that provides a range of programs to support the wellbeing of seriously ill children.

### [Kids' Cancer Project](#)

Independent national charity dedicated to supporting childhood cancer research.

## **What are some other supports for children and families?**

### [Beyond Blue](#)

Beyond Blue provides information and support to help everyone in Australia to achieve their best possible mental health. The service supports those experiencing depression, anxiety or going through a difficult time. The phone service 1300 224 636 operates 24/7, while the website offers online chats, email support and online forums.

### [GP and psychologist](#)

Families can consult with their local health professional to get access to specialised support.

### [Healthdirect Australia](#)

Healthdirect is a national, government-owned, not-for-profit organisation supporting Australians in managing their own health and wellbeing through a range of virtual health services. Health advice is available on 1800 022 222.

### [Kids Helpline](#)

Kids Helpline is a free, private and confidential 24/7 phone and online counselling service for children aged 5–12 years and young adults aged 18–25. Qualified counsellors are available via phone on 1800 551 800 or via WebChat or email.

### [Lifeline](#)

Lifeline is a national charity providing all Australians experiencing emotional distress with access to 24-hour crisis support and suicide prevention services. Available via phone on 13 11 14.

### [Parentline](#)

Parentline is a confidential telephone service providing professional counselling and support in Queensland and the Northern Territory. Available via phone on 1300 301 300.

### [Raising Children Network](#)

Raising Children Network is a comprehensive and trusted online resource for parenting information. A website includes information on children's health and wellbeing across the ages. It includes videos, fact sheets and downloadable toolkits on child development, behavioural problems and health issues.



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