



The Impact of Children's Play in Hospital

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"Health play specialists empower children to learn about their ill health and help them to understand the interventions that are required during their time in hospital. Play intervention can reduce feelings of anxiety and help children to feel happy whilst being in hospital. Resources provided by Starlight such as Boost and Distraction Boxes support health play specialists in their work to provide play for children in hospital which is vitally important during their time of ill health." – Penelope Hart-Spencer, Chair of the National Association of Health Play Specialists (NAHPS)

Executive Summary

Research conducted by Starlight Children's Foundation has found that play is a valuable resource to the NHS and has a positive impact on the wellbeing of children and young people through serious illness and hospital treatment. In 2019, Starlight reviewed 138 pieces of research on the impact of play in hospitals and found that:

- Play can help children and young people have a more positive experience of hospital.
- Play is essential for improving the wellbeing of children and reduces anxiety, fear and stress associated with being in hospital.
- Play can reduce a child's feeling of pain associated with hospital treatment.
- When play and distraction are incorporated into hospital treatment, it can sometimes reduce the need for sedation.
- Play can help children and young people in hospitals build resilience which helps them to cope and be better engaged with treatment.
- Play can help give children their sense of control and autonomy back, which is often lost through illness and hospitalisation.
- Play can also strengthen family wellbeing and relationships.

For the past two years, Starlight has also evaluated the impact of play in hospitals through their own work and have found that the services they provide have had a similar impact. Based on over 1000 feedback survey responses from health professionals and parents, Starlight have found that they are the main providers of resources for play in hospitals. The key impact of Starlight's services and provisions lies in:

- Increasing the accessibility of play and distraction to children in hospital.
- Making hospital a more fun place to be in by improving the experience of both the child and their family.
- Reducing anxiety and distress, improving wellbeing and helping children relax in stressful medical environments.
- Helping to improve children and young people's engagement with treatment, leading to better recovery.
- When health professionals used Starlight resources to play with children and young people, they observed a reduction in pain and need for sedation during medical procedures
- Making hospital a less frightening environment.
- Helping to improve the rapport between the health professional, child and family.



In addition, it was also found that health professionals (particularly health play specialists) are integral to the effective delivery of play in hospitals, supporting both the child and their wider family in creating a more positive hospital experience.

Since March 2020, Starlight have observed that the state of play is changing and they have been monitoring the impact of Covid-19 on children's experiences of hospitals and their access to play. This research has found that:

- Seriously ill and hospitalised children are now even more physically isolated than before. In hospital, they may only be allowed to have one parent with them and no other visitors, whilst at home, seriously ill children are often shielding.
- Lockdown has actually created opportunities for some children and young people to build and strengthen their relationships with their family at home and their friends online.
- Children with serious illness are often not allowed in the very few playrooms that have remained open in hospitals for their own protection.
- Toys have been removed due to risk of infection. For example, bubble tubs are one of the most popular items provided by Starlight, but due to Covid-19 and the risks associated with blowing bubbles, this item can no longer be used.
- Wards have been adapted to cope with the demands of Covid-19, which often means that children are not able to access their usual spaces and receive care from unfamiliar health professionals.
- There is an increased pressure on parents to support their seriously ill child and their treatment whilst also managing their schooling, on top of now possibly having to work from home.
- There have been longer wait times in hospitals and shielding families have told Starlight that they are placed in isolation while they wait, with nothing to do.
- Many children, young people and their parents have told Starlight that they miss participating in sports activities, particularly when they are in hospital.

This has shown that seriously ill children and those in hospital are missing out on play, sport, social and fun activities to an even greater extent during this pandemic, and there is an urgent need to meet the demand for these activities. Building upon the continuing positive impact of their services, Starlight is working with experts, health professionals, children, young people and families to drive innovation, and co-create and deliver impactful child-centred play.



The Impact of Children's Play in Hospital

Introduction

There is significant research on the importance of play for all children, and play is covered in national and international policy. A child's right to play is guaranteed in Article 31 of the United Nations Convention on the Rights of the Child, which also includes the right to appropriate facilities and non-discrimination in play provision (Davey and Lundy, 2011). In hospital and during treatment, play is recommended for the wellbeing of children by the Care Quality Commission (2014), the World Organisation for Early Childhood Education and the Department of Health (National Children's Bureau, 2005). Play is also endorsed as an essential aspect of a child's palliative care (Chambers, 2018; Villanueva et al., 2016).

Starlight has been delivering services to seriously ill children and hospitals since 1986. More recently, Starlight has been gathering evidence to understand the importance and impact of play in hospital. Since 2017, Starlight has taken steps to measure, monitor and record the impact of their services in delivering play to hospitals. The evidence has been gathered from over 1000 feedback survey responses from hospital staff and interviews with focus groups in nine hospitals.

Starlight also undertook a scoping review of the literature on play and distraction in hospitals, and initially limited their search to literature published in 2010 or later. However, given the significant gaps they found in some areas, they extended the search to publications from 2000 to 2019, as well as some key literature dating back to 1980. The final review included 138 documents.

From both the literature review and its own research, Starlight has concluded that play can have a significant positive impact on outcomes for children and young people in hospital, as well as their families. These findings are detailed below.

1. Play can help children and young people have a more positive experience of hospital.

"Over the years, the (Starlight) Boost Boxes have helped in many ways. The one example that stands out for me is working with a patient who lost their sight due to illness. Coming into hospital is challenging for the patient, family and also for the staff who are treating them, who have to adapt the setting, how they approach the patient, and provide activities that are manageable without causing further frustration. The recent Boost Box was a sensory one and the coloured felt balls with dimples or bumps on them was one of the best things he has experienced whilst in hospital. He now has a few different ones which he uses during having treatment carried out." - Play Team Member

One of the key impacts that has emerged from Starlight's services in hospitals is that their play and distraction resources help to make the hospital environment a more fun place for children. These resources not only improve the child's experience of hospital and treatment, but also their family's experience too.

Similar to Starlight's own findings, wider literature indicates that play can overcome potentially stressful hospital environments, improving children's experience of hospitals (Burns-Nader and Hernandez-Reif, 2016; Tonkin, 2014a), which can help children to cope better with future hospitalisation. Research undertaken by Starlight using Care Quality Commission (CQC) (2017) data from their survey with children and young people on their experiences of hospital, found that having enough things to do in hospital and having someone to play with had a significant impact on a child having a more positive experience of hospital. One of the main findings of the most recent CQC survey



(2019) was that children and young people felt there was not enough things for them to do in hospital, and that this needed improving.

“...because it really does help make a child's day..... especially after something quite traumatic. The smile you get from a child after giving them an item is just amazing.... something so little makes so much of an impact” - Rebecca, Paediatric Nurse, Worthing Hospital

2. Play and distraction in hospital is essential for improving children’s wellbeing and reduces anxiety, fear and stress associated with being in hospital.

"A young girl aged 12 was unable to leave her room. She was very stressed due to ongoing investigations into her symptoms with the fear of significant illness. She was able to watch the show using an AV1 robot and it provided a huge distraction for her, allowing her time to forget her fears and laugh and be a child." – Education Specialist, Whipps Cross Hospital

Another significant benefit that Starlight has found in delivering play and distraction to hospitals, is that 80% of people who fed back about their services last financial year stated that their services improve wellbeing and reduce fear, anxiety and distress associated with being in hospital.

Starlight’s review of the literature also found evidence to suggest that play and distraction can have a positive impact on children’s wellbeing in hospitals and their ability to cope with illness and treatment (Child Life Council, 2014; Dell, 2003; Gariépy and Howe, 2003; Humphreys and LeBlanc, 2016; Nabors et al., 2019; Nijhof et al., 2018; Tonkin, 2014b). Play is particularly important for the wellbeing of children who have repeated experiences of hospitalisation, for example due to serious illness (Dell, 2003; Koukourikos et al., 2015). A literature review by Koukourikos *et al* (2015) found that play in hospital can reduce the intensity of negative feelings about being in hospital, thereby reducing distress and anxiety from admission through to post-treatment. Feedback collated by Starlight regarding its own services has generated similar results.

Play can also encourage child development in situations that pose a risk to this, such as hospitals (Yogman et al., 2018). Some organised therapeutic forms of play in hospital have been shown to have positive effects on children’s wellbeing, such as storytelling in groups, as in Margherita *et al*’s mixed methods study of 49 children in an oncology hospital (2014). Children created fairy tales in groups to help them process their experiences symbolically; the storytelling method helped them to communicate their pain and improved communication between children in the groups.

Research also shows that play has developmental benefits for children, physically, neurologically and emotionally (Lego Foundation et al., 2017). It can help children to develop resilience, benefits their psycho-emotional wellbeing, and can be a resource for children facing difficult life circumstances (Children’s Commissioner for England, 2018; Fearn and Howard, 2012; National Children’s Bureau, 2008; Yogman et al., 2018). While play is known to be of vital importance for children’s development and health, as explored below, it may be obstructed for children with chronic or life-threatening illnesses, for reasons “beyond the illness itself” (Currier et al., 2009), that include hospitalisation.



3. Play and distraction can reduce children’s feelings of pain associated with hospital treatment.

“...whilst the patients are discovering the Distraction Boxes, they aren’t thinking about where they are or the pain they are in. The Distraction Box allows children and young people to get in touch with their child-like ways of creating stories and games through different toys.” - Keshia, Play Team Leader, North Middlesex University Hospital

One of the many observations of health play specialists that have been communicated to Starlight, is that children and young people feel less pain associated with treatment when they are engaged in play.

There is also some evidence in the literature that play can alleviate pain (Chen et al., 2000; Moore et al., 2015). Similar to Starlight’s findings, in a quasi-experimental study of 70 children of both genders and their caregivers, Hassan *et al* (2019) found that planned play interventions had a statistically significant effect on pain intensity for children after abdominal surgery, along with other improved health outcomes. In a pilot study on directed play during burns treatment, Moore (2015) also found that directed play alleviated children’s pain and distress. Bolig (1980) found that the more time children spent in a supervised play and activities programme, the more control they felt over their situation of hospitalisation. However, there is limited evidence on health play specialist/Child Life play programmes and interventions to help children cope with serious illness and improve health outcomes.

4. When you incorporate play and distraction into hospital treatment, it can sometimes reduce the need for sedation.

“It was a fabulous diversion and much enjoyed. One young lady had so much fun, she didn’t need the intended sedation before her surgery!” - Dorset County Hospital

In over half of Starlight’s interviews/focus groups, it was mentioned that health play specialists had observed a reduction in the need for sedation when a child was engaged in play. Because the child was less distressed and fearful, they did not resist treatment and therefore, did not need sedation. This also meant that children spent less time in hospital, and in recovery.

Our literature review also found that play can reduce children’s anxiety about interventions; this is the most widely-researched impact of play and distraction in hospitals (Bolig, 1984; Bray et al., 2019; Child Life Council, 2014; Potasz et al., 2013; Urquiza, 2010). Hart-Spencer and Griffiths (2015) have argued, from their anecdotal experience, that Health Play Specialist programmes may reduce the need for anaesthetic medication (2015).

“When children are given the opportunity to explore and learn through therapeutic and specialised play preparation, it can reduce the need for anaesthesia and sedation in areas such as radiology and radiotherapy/proton beam therapy. In radiotherapy and proton beam therapy treatments, children attend daily for treatment for several weeks and following health play specialist support, they are able to have their treatment awake and happy; fully confident that they understand what will happen during their treatment.” - Penelope Hart-Spencer, Chair of the National Association of Health Play Specialists (NAHPS)



5. Play can help build resilience for children and young people in hospitals, which helps them to cope and be better engaged with treatment.

"Play is the natural medium of the child. Having these wonderful gifts allows us to offer natural support to the young people, who are very often frightened and having to cope with strange sights, sounds, and smells, strange routines and loss of control. This goes for the parents too. Supporting children's play is one of the most important things we do as part of an admission" - Eddy, Ferndene Hospital

Through research, Starlight has found that play in hospital enables children and young people to be happier, less stressed and fearful. This in turn helps them build up their resilience and also helps them cope with treatment.

The literature reviewed by Starlight found that play can contribute to children's illness coping strategies (Fernandez, 2015; Nabors et al., 2013a; Rindstedt, 2014). Play can support children in dealing with the difficult emotions that may arise from hospitalisation (Koukourikos et al., 2015). In their study of children with leukaemia, Gariépy and Howe (2003) found that play can significantly influence a child's happiness during long-term treatment. Njihof *et al* (2018) also found in their review of the literature, that play can lead to coping better with childhood illness, enhancing children's adaptability to stressful chronic conditions, while also promoting the cognitive, emotional and physical functioning that will help to secure their future health.

Young children are most likely to be in hospital (NHS Digital, 2019/20), and are particularly vulnerable to the effects of stress and fear during hospitalisation (Hodapp, 1982). Studies have shown that play is a key coping strategy for pre-school-aged children in hospitals (Salmela et al., 2010; Williams et al., 2019). Play can be used to help prepare younger children for procedures, to help them cope with the hospital environment, and to give them agency over decisions about themselves and their lives (Humphreys and LeBlanc, 2016). Salmela *et al's* qualitative study with 89 pre-school-aged children with experiences of hospital treatment (2010) found that play was one coping strategy often used by young children.

"We enjoyed the panto, it was amazing, Bonnie had a great time and this made her treatment day a lot easier, she loves Aladdin thank you x" - Parent

Chen *et al* (2000) studied behavioural and cognitive interventions in the treatment of children's pain and concluded that positive memories of procedures can help children to tolerate future painful procedures. They also found that pain sensitivity, coping styles and cognitive development levels all have an impact on children coping with such procedures. Other risk factors may include previous negative experiences of medical treatment, the seriousness of the illness or severity of the procedure, parent-child interactions, and a lack of positive coping strategies (Kirkby and Whelan, 1996; Noel et al., 2010).

A key finding in Starlight's feedback from hospitals, is that children and young people are more engaged with treatment as a result of accessing Starlight's provisions for play and distraction. Starlight have also found that if a child has a positive relationship with treatment and hospital care, they will build positive associations and memories of it. This will have a long-lasting impact on that child's engagement with treatment and health care.



6. Play can help give children back a sense of control and autonomy when this has been lost through illness and hospitalisation.

“These groups of children and young people benefit particularly from the Distraction Boxes, due to the fact that any play or diversion therapy used is solitary based. One to one distraction techniques involve that one particular patient to engage, focus, communicate and utilise the provisions within the Distraction Box to their own personal level of fear, anxiety, timing, health needs and their choice in what is effectively a positive experience due to being involved in play.” - Elizabeth, Health Play Specialist, Whiston Hospital

Health play specialists have told Starlight that engaging children in play and offering choices on what they can do whilst in hospital can provide them with a sense of control and autonomy, when they often have limited influence on their treatment.

Many studies have shown that children themselves ask for and value play provision as part of their hospitalisation experience (Care Quality Commission, 2017; Chappuis et al., 2011; Fereday and Derbyshire, 2008; Humphreys and LeBlanc, 2016). In a quasi-experimental study of 304 paediatric patients, Li *et al* (2016) found that a mix of structured and unstructured play delivered by health play specialists can alleviate children’s anxiety and reduce negative emotions associated with hospital treatment, when health play specialists chose the most appropriate play interventions for each child. Interventions decreased anxiety, increased children’s agency and control through preparation play, gave them opportunities to socialise with other children, and allowed them to feel that their wellbeing was valued by the hospital.

7. Play can also strengthen family wellbeing and relationships.

“The Starlight Pantomime provided a heart-warming family event at no cost. Families were able to enjoy the experience together and parents as well as the children enjoyed the singing and dancing. Every family commented on how good the pantomime was and requested the same in 2019. One family were over the moon to watch their daughter dance for the very first time.” – Health Professional, Nevill Hall Hospital

One of the biggest impacts that Starlight has observed through the delivery of their services, is how their provisions help build family relationships, wellbeing and confidence.

Similarly, in the literature, Starlight has found that play can support family life, strengthening parent-child bonds (see Milteer *et al*’s literature review, 2012). Both play and distraction are used by children and families to cope with their feelings about chronic illness and hospitalisation (Nabors et al., 2018, 2013a).

Play can also help siblings of hospitalised children understand their family circumstances. In Nabors et al’s qualitative study of 15 children with an illness and 14 siblings (2013a), play was a method for both siblings and patients to express their emotions and experience a sense of mastery during stress and medical trauma. It also helped them to explore memories in a safe environment. Nurses and medical staff were able to explore and understand the children’s fears and misconceptions about medical procedures, informing their education and support of these children.

Similarly, Morrison and Gullón-Rivera’s review of a Social Stories programme with siblings of children in a neonatal intensive care unit (2017) found that this form of play helped siblings to tell their family stories and process their experiences. However, this was a brief review of a programme, rather than a study, and the authors noted that there is a lack of empirical studies on sibling support in such situations.



8. Health professionals (particularly health play specialists) are integral in delivering effective play in hospitals, to not only support the child but also the wider family in creating a more positive hospital experience.

Starlight is a proud partner of the National Association of Health Play Specialists (NAHPS). Studies on the barriers to play show that in some settings, play must be promoted rather than assumed to be automatic for children (Lego Foundation et al., 2017). Rather than simply offering entertainment, facilitating child development and encouraging the recovery of skills lost through illness (National Association of Health Play Specialists, 2000), health play specialists encourage wellbeing and resilience (Jun-Tai and Barbour, 2014; Tonkin, 2014a), enhance health care and outcomes for children (Hart-Spencer and Griffiths, 2015), improve potentially stressful hospital environments based on children's needs (National Association of Health Play Specialists, 2000), and 'empower children to become active rather than passive participants in terms of their own healthcare' (Jun-Tai and Barbour, 2014, p. 96).

"Our therapists have used items from the sensory Boost Box to engage with children and young people who have learning/intellectual disability and autism - who would otherwise have struggled to engage with therapies or procedures. I have had some lovely feedback from the team about using the items in this way. They particularly like the sensory Boost Box for our area of work" - Dr. Heather McAlister, Consultant, Chesterfield Royal Hospital

Research on play therapy has found that a trusting relationship with play therapists influences positive wellbeing outcomes (Baggerly et al., 2012). Some research has found that play and distraction interventions in hospitals have the most impact if carried out by trained professionals, rather than just by family members (Potasz et al., 2013). Other studies have found that parental anxiety can have negative impacts for children undergoing medical interventions (Cavender et al., 2004; Noel et al., 2010; Rokach, 2016), which is why it is important to have trained professionals present to provide support. These studies may also suggest that specialists, rather than parents, are best placed to deliver play and distraction, as appropriate family support is important for children's wellbeing.

Parental presence is valued by children in hospitals (Bauchner, 1991; Chappuis et al., 2011) and recommended by health care agencies. Separation from family is a factor in children's anxiety in hospitals. Furthermore, the specific type of parental behaviour displayed during interventions can determine the impact of parental presence for children (Cavender et al., 2004). Specialists may therefore be best placed to guide and enable parental roles in distraction and in hospital treatment more generally.

9. Impact of Covid-19 on play in hospitals.

"Everything about our practise as play staff has changed. Having had playrooms closed down and used for other purposes, and with lots of play staff being redeployed, play practise has had to change drastically. I'm currently helping run a non-Covid Paeds unit, so we are seeing patients that have benefitted from the Nintendo Bundle, but our numbers are drastically down to normal. I also can't do the usual preparation sessions that I would have done with patients." - Paul, Play Team-Health Specialist, Bronglais General Hospital

More recently, Starlight has been monitoring the impact of Covid-19 on seriously ill children, young people, parents and health professionals.

Children and young people told Starlight that lockdown stopped them being able to go out and do the things they like doing, like hanging out with friends and doing sports and hobbies. Some said that this



meant that they had less fun and that they felt bored and lonely. Some felt sad and worried about the pandemic.

"It has had a big effect on us as a family as we usually spend a lot of time out and about exploring. Lucy was very poorly and in hospital for 3 months before lockdown began, so we had already missed out on so much time. Lucy loves to be outside and playing with others but since December, this hasn't been possible. Lucy has found it hard as she isn't used to being in (doors) so much. We have been doing more art stuff, games and online activities but getting out in the garden and for exercise as much as we can." – Claire (Parent)

For some children and young people, lockdown also created opportunities for them to build and strengthen their relationships with their family at home and their friends online. These children and young people told Starlight that they felt more self-motivated, happy and less lonely. This is because they spent more time with their families and were able to connect with friends online.

Many parents told Starlight that they felt more isolated and talked about the difficulties surrounding increased isolation. They found that their children were missing out on normal activities and were not able to go out, play nor go to regular activities. Some parents have said that the pandemic and its restrictions have made them even more aware of their child's illness, since many have needed to shield.

Some parents felt that there was an increased pressure on them because they were not able to go anywhere and that caring for their children, sometimes on top of working from home as well, had proved especially difficult. Parents have told Starlight that provisions like their virtual escapes provided families with an opportunity to have a break from their current routines and was an opportunity for their children to engage with a new activity.

Longer wait times at hospitals, coupled with being in isolation in small rooms which are not fit for purpose (often without natural light) has been a difficult experience for many families. Having a serious illness has meant that many of the children whom Starlight work with have had to engage in increased shielding/isolation in hospitals. When these children go to hospital, they experience longer wait times, and are being placed in rooms without any resources for play and distraction whilst they are waiting. They are not able to access normal waiting areas/playrooms.

10. How play in hospitals during the pandemic could be improved.

Starlight also asked families and health professionals what measures could improve play during the pandemic.

"During these uncertain times, tech has become more prominent as we look at using different services such as Zoom and videos to both prepare the children and young people, but also to keep them in touch with extended family, as well as some of our own services such as our Animal Assisted Intervention Team." - Joyce, Youth and Play Services Manager, Southampton Children's Hospital

Technology has been at the forefront of tackling isolation and therefore hospitals need to improve their WiFi. Both children and parents, as well as health professionals, have commented on how limited the provisions for play in isolation are and would like there to be more interactive activities available in isolation, like gaming. Families enjoyed being able to spend time with other families and children through Starlight's virtual escapes, and requested more online activities to do with their children or a way for their children to connect with other children during lockdown. When asked how Starlight can help, health professionals suggested that technology would be a good way for children to be able to connect with family and friends. It would also give children more to do whilst in hospital. They also



suggested virtual events and activities for the children, similar to what Starlight are doing with virtual escapes. However, in order to achieve this, WiFi in hospitals needs to be improved.

Both families and health professionals would like more lockdown related activities and Covid-19 advice to get them through lockdown. Some families have requested activity packs for their children whilst they are in lockdown. Others have requested ideas or games/activities the family can do together. Some health professionals have asked for further advice on how to engage children in play and distraction during lockdown, as well as advice on how to speak with children about Covid-19. Further education for staff who work with children, as well as easy to understand educational material about how hospital/school will be different because of Covid-19 has also been requested. Health professionals have also asked for toys that are more related to Covid-19 as a way to explain the pandemic to children, for example, having teddies/dolls wearing masks so that children aren't scared when they see health professionals wearing them, as well as child friendly masks so that children will feel more comfortable.

Both children and parents stated that they would like more activities and better facilities for children in isolation and those who are shielding. This includes better access to things to do in isolation, including interactive activities like gaming to combat isolation. Children and young people said that they would like more access to physical activity and sports both at home and in hospital.



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