



Starlight Deliveries



Starlight Deliveries distributes millions of dollars' worth of donated products directly to our 800+ hospital and health facility partners every year – free of charge. Thanks to the generosity of our corporate partners, individual donors, foundations, and other groups and organizations who support our work, these donations provide hundreds of thousands of books, toys, games, arts & crafts, and other items that kids love and hospitals use to deliver happiness to seriously ill children.

Starlight coordinates the delivery of these donated products through a secure e-commerce platform where our registered hospital partners can view, select, or request items that are most useful and relevant for their patients and staff. Starlight Deliveries ensure hospitals receive exactly the items they need, in precisely the quantities they can accommodate, just when they need them, and at no cost to the hospital.



Since 2014, Starlight has shipped almost

\$10 million

in deliveries that have been distributed to over

1.2 million at more than

648 children's hospitals & pediatric units

in all 50 States and Puerto Rico.



Starlight will continue to expand the product offering on the e-commerce platform so that more and more seriously ill children can enjoy the highest quality items from world-class brands and companies.



Play

Playing with toys has a high therapeutic value and can help children learn and adapt to the hospital setting.



Entertainment

Toys, books, movies, and arts & crafts provide children a sense of relief from stressful situations through enjoyable, relaxing activities.



Normalization

Access to books, toys, and games brings children closer to what is familiar and reconnects them to their home life.

Starlight Deliveries

Program Overview



Every year, Starlight Deliveries distributes millions of dollars' worth of donated products directly to our 800+ hospital and health facility partners – free of charge. Thanks to the generosity of our corporate partners, individual donors, foundations, and other groups and organizations who support our work, these donations provide hundreds of thousands of books, toys, games, arts & crafts, and other items that kids love and hospitals use to deliver happiness to seriously ill children. Starlight coordinates the delivery of these donated products through a complimentary, fully customized, and secure e-commerce platform where our registered hospital partners can view, select, or request items that are most useful and relevant for their patients and staff. Starlight Deliveries ensure hospitals receive exactly the items they need, in precisely the quantities they can accommodate, just when they need them, and at no cost to the hospital.

"Bringing happiness to our pediatric patients through comfort gifts often reduces their fear of being in a medical environment and helps them be more receptive to necessary medical treatment."

–Margie Dolinski, Executive Director, LAC+USC Medical Center

Reach

Since 2015, Starlight has shipped **\$9,902,206 in deliveries** that have been distributed to **1,260,561 children** at **648 children's hospitals and pediatric units** in all 50 states and Puerto Rico.

Program Impact



Play

"The Radio Flyer Wagon is a significant factor in my son's long hospital stays. He was unable to communicate well and has speech delays. However, the one thing he could always say was "Red Go!" That meant he wanted to take a lap in the wagon through the oncology floor. It was instrumental to his experience and it always gave him something to look forward to no matter how weak he was during his chemotherapy treatments. He even at one point convinced one of his favorite male nurses to take a ride with him!"

–Krista N., Starlight Mom

- During hospitalization playing with toys has proven to be of high therapeutic value for ill children, thus contributing to both their physical and emotional well-being and to their recovery (Koukourikos et al., 2015).¹
- It is important for a child to play while they are in the hospital; it can help them reconnect with their home life, distract them from pain and worry, and it can help them get used to new people and things they will see at the hospital (SickKids, 2010).²



Entertainment

"These wonderful items help calm patients so they can have the best possible treatment experience. Ultimately this kind of gift allows us to maintain our unique child-friendly atmosphere and gives our kids some extra entertainment and emotional support to come with the more challenging parts of medical care. We're giving children back their childhood!"

–Stephanie Brigger, Vice President, Scottish Rite Hospital for Children

- Toys can be an effective distraction from the hospital environment surrounding sick children, bringing them closer to what is familiar, reducing their anxiety, facilitating their acceptance of procedures, and providing entertainment in an environment that is otherwise very stressful (Soares da Silva et al., 2016).³



Normalization

"We were able to include the WowWee Fingerlings in our Spring Easter Event for our patients! Having the Fingerlings to include in the Easter Basket really helped our patients feel at home and be included in holiday celebrations they would have had to miss being in the hospital. It seems small but having that toy to normalize their experience and bring a smile means the world to us."

–Edith Alvarez, White Memorial Medical Center

- The hospital is disruptive to a child's life. Playing with toys is one way to reconnect a child to their home life. The more a child can play, the happier the child will be, and happiness promotes recovery (SickKids, 2010).²

The Future

- Starlight will continue to improve the user experience for hospitals using our e-commerce platform by ensuring that our technology remains best-in-class in efficiency and quality so ordering Starlight Deliveries is simple, easy, and quick.
- Starlight will continue to expand the product offering on the e-commerce platform so that more and more seriously ill children can enjoy the highest quality items from world class brands and companies.

¹ Koukourikos, K., Tzehe, L., Pantelidou, P., & Tsaloglidou, A. (2015). THE IMPORTANCE OF PLAY DURING HOSPITALIZATION OF CHILDREN. *Materia socio-medica*, 27(6), 438–441. doi:10.5455/msm.2015.27.438-441

² Playtime at the hospital for preschoolers aged 3 to 5 years. (2010). Retrieved from <https://www.aboutkidshealth.ca/Article?contentid=1162&language=English>

³ Soares da Silva, J., Pizzoli, L., Amorim, A., Pinheiros, F., Romanini, G., Gomes da Silva, J., . . . Alves, S. (2016). <https://www.pediatricnursing.net/ce/2018/article42026168.pdf>. *Pediatric Nursing*, 42(2).



Starlight Gaming



Starlight Fun Center® mobile entertainment units provide kids with hours of fun and, honestly, distraction. Powered by Nintendo®, designed to roll anywhere in the hospital, and specifically manufactured to meet strict infection safety protocols, they allow children to play video games or stream their favorite movies and TV shows from the comfort of their hospital bed or in a playroom with a group of kids. They provide seriously ill children hours of entertainment and a sense of normalcy while hospitalized.



Since 1992,

7,200 Starlight Gaming Units

have delivered happiness to over

11.6 million children at more than

800 children's hospitals & pediatric units

in all 50 States and Puerto Rico.



The Starlight gaming units are an incredible and unique tool that helps turn a sick or injured child's pain, fear and stress into smiles and laughter by providing them with the best in entertainment, education, and one-of-a-kind experiences. We are thrilled and thankful to Starlight Children's Foundation for this generous gift.

—Anthony Scaduto, M.D., Orthopedic Institute for Children



Play

Highly interactive experiences engage children through mastery and achievement.



Entertainment

Playing popular games provides children a much-needed sense of relief and distraction from stressful situations.



Socialization

Gaming gives pediatric patients an opportunity to connect with their siblings, peers, and clinicians.



Normalization

Playing video games provides structure, familiarity, and security during hospitalization.



Emotional Support

Video games redirect a child's focus, resulting in reduced anxiety and improved mood.



Pain Management

Engaging with games that require user participation leads to less perception of pain at the central brain level.



Physical Therapy

Unique features of the gaming units allow physical therapists to capitalize on their patients' functional abilities in a fun way.

Starlight Gaming

Program Overview



For more than 25 years, Starlight mobile gaming units have provided millions of seriously ill children with hours of entertainment, distraction, and a sense of normalcy. Starlight Gaming Units are specially manufactured to meet strict infection safety protocols and are designed to safely roll anywhere in the hospital. Our Gaming Units powered by Nintendo consoles featuring online access to platforms like Netflix and Hulu, provide entertainment and relaxation for kids in a rather overwhelming situation. Doctors, nurses, clinicians, and child life specialists are able to use a single gaming unit in variety settings, from the ER, to a playroom, to a treatment, and even bedside for a pediatric patient in isolation.



"The Starlight Gaming Units are an incredible and unique tool that helps turn a sick or injured child's pain, fear and stress into smiles and laughter by providing them with the best in entertainment, education, and one-of-a-kind experiences. Their belief that all children deserve to enjoy the magic, wonder and happiness of childhood mirrors our mission of helping children grow well and play well; so, we are thrilled and thankful to Starlight Children's Foundation for this generous gift."

—Anthony Scaduto, M.D., Orthopedic Institute for Children

Reach

Since 1992, **7,200 Starlight Gaming Units** have delivered happiness to **11,607,645 children** at **919 children's hospitals and pediatric units** in all 50 states and Puerto Rico.

Program Impact



Play

"The Starlight Gaming Unit was used as an incentive for a particularly difficult patient who needed some positive reinforcement and bedrest. The patient was given a sticker chart to earn playing time on the Starlight Gaming Unit. When he redeemed them for play time, his demeanor changed completely to being joyful, happy and playful. He engaged in play both alone and with the child life specialist which helped him connect to staff. The Starlight Gaming Unit helped with both behavior regulation and normalizing the hospital environment through play. We are so glad to have this option available for patients."

—Rebecca Martin, CCLS, UnityPoint Health Methodist

- School-aged children and adolescents seek play that contributes to feelings of mastery and achievement, which is one reason video games are so popular with this age group (American Academy of Pediatrics, 2014). 1



Entertainment

"The Starlight Gaming Unit has been a meaningful source of entertainment in our infusion clinic. Over the winter holidays, we had several siblings accompany patients to appointments since they were off of school, and we watched one set of brothers (who typically don't get along), play and laugh with each other throughout their whole stay while using the Gaming Unit. Their mom was so grateful, and we were happy to see them share a positive experience together."

–Kellie Matters, CCLS, Kaiser Permanente Capitol Hill

- To a hospitalized child, a Starlight Gaming Unit helps combat boredom and loneliness through access to popular and entertaining games that can engage and entertain children during long hours of treatment or extended stays (Wallace, 2018).²



Socialization

"Starlight Gaming Units not only instantly brighten up a child's room but also makes it possible for us to connect with children and help foster an atmosphere that is child focused. These aspects may seem small, but they help families feel a sense of trust when there is a display by staff to recognize the unique needs of their child."

–Erica Magnuson, CCLS, UCI Health

- Electronic games enhance the bio-psycho-social well-being of children and young people. A systematic review especially highlighted that pro-social content in games and software positively influences children's social behavior including helping and sharing.
- Social benefits of Electronic Gaming for Entertainment (EGE) include increased cooperation, support, helping behaviors, and civic engagement (Horne-Moyer et al., 2014).³



Normalization

"This program continues to make a huge difference in relieving anxiety in our patients and giving them back a sense of normalcy in their lives."

–Velma Workman, Community Development, Hoops Family Children's Hospital

- A child's ability to play video games in the hospital restores the discontinuity resulting in his/her life due to hospital admission and shows somehow that the child may continue his/her normal life even inside the hospital (Koukourikos et al., 2015).⁴



Emotional Support

"There was a child that was very fearful when his mother underwent emergency surgery. The staff engaged him with the gaming activities. He immediately dried his tears and became distracted in the Starlight Gaming Unit. When his mom was brought back to her room from surgery, he was thrilled with his game and couldn't wait to share with her."

–Dorinda Hock, Director of Maternal Child Health, Anaheim Global Medical Center

- Research shows that video games, consoles, and tablet computers are effective distractors, reducing anxiety and stress in children and young people.
- Emotional benefits of using Electronic Gaming for Entertainment (EGE) include improved mood or increases in positive emotion and adaptive regulation strategies for managing negative emotions like anger, anxiety, and sadness (Horne-Moyer et al., 2014).³



Pain Management

"We had a patient who was extremely nervous being in the hospital environment and even more nervous about the pain associated with getting a nasogastric feeding tube. He has several issues, which has made his hospitalization even more difficult. He voiced wanting to play on a game system because that is what keeps him calm and can 'keep his mind off of all that is going around him right now.' When child life brought the game system into the room, he got very excited and went straight to playing Minecraft and has remained calm and focused ever since."

–Kelli McElhone, Grant Specialist, Covenant Children's

- Playing games takes the patients' minds off of what hurts them. One of the best ways to help pain is through distraction, and so when your mind is somewhere else and you can get in another world and have some fun and feel in control and a sense of mastery, it can be very useful to you (Kaslow, 2007).⁵
- Research underlines the fact that pain is always felt in the brain and not in the extremity or body part where the cause might be. Distraction with video games that require user participation will lead to less perception of pain at the central brain level (Black, 2018).⁶



Physical Therapy

- The Starlight Gaming Unit is being used in hospitals, rehabilitation, and classroom settings, all with the similar goals of improving patients' standing balance, strength, coordination and activity tolerance (Gargin and Pizzi, 2010).⁷
- The unique features of the gaming system allow occupational and physical therapists to capitalize on their patients' functional abilities in a fun and novel manner (Gargin and Pizzi, 2010).⁷
- Children may find therapy boring or stressful, therefore the concept of playing as a form of therapy can be much more encouraging.

The Future

- In the fall of 2019, Starlight will launch the Nintendo Switch as a part of its Starlight Gaming program. It will have the capability to attach to personal beds or chairs which increases portability and gameplay flexibility in addition to our traditional mobile unit.
- Starlight continues to explore opportunities to enable all of our gaming experiences to be accessible no matter the patient's physical limitations.

¹ Child Life Services; Committee on Hospital Care and Child Life Council. (2014). American Academy of Pediatrics,133(5).

² Wallace, N. (2018). Video Games for Kids in Hospital Just What Doctor Ordered.

³ Horne-Moyer, H. L., Moyer, B. H., Messer, D. C., & Messer, E. S. (2014). The use of electronic games in therapy: a review with clinical implications. Current psychiatry reports, 16(12), 520. doi:10.1007/s11920-014-0520-6

⁴ Koukourikos, K., Tzaha, L., Pantelidou, P., & Tsaloglidou, A. (2015). The Importance of Play During Hospitalization of Children. Materia socio-medica, 27(6), 438–441. doi:10.5455/msm.2015.27.438-441

⁵ Kaslow. (2007). Video Games May Help Relieve Pain. CBS News.

⁶ Black. (2018). Gaming as a Tool for Pain Relief. Practical Pain Management,18(1).

⁷ Gargin, & Pizzi. (2010). Wii-HAB: Using the Wii Video Game System as an Occupational Therapy Intervention with Patients in the Hospital Setting. 23(1).

Starlight Hospital Wear

The transition from one's own clothes to traditional hospital wear is one of the highest stress moments in a child's hospital experience. Starlight Gowns™ are superior to regular hospital gowns because they are better at supporting both the functional needs of hospital staff and the psychosocial and emotional needs of pediatric patients.

Since 2016, over

250,000 Starlight Gowns

have been distributed to seriously ill children at more than

350 hospitals & pediatric units

in 48 states

92%

of family survey respondents agree or strongly agree that their child feels better about how they look in a Starlight Gown than a traditional hospital gown.¹

86%

of staff report that Starlight Gowns make it easier for medical staff to build rapport with seriously ill children and their families.

87%

of staff report that the Starlight Gown's design makes performing routine tasks easier and more efficiently for medical staff and less stressful for children.¹



“

I had a young 6-year-old child who was extremely anxious. Once the child saw how fun this gown was, he was immediately ready to change, and became more compliant and at ease. By seeing him become less anxious, his family members also became calmer.

—Lexi Little, CCLS, CHRISTUS Shreveport-Bossier Health System



Comfort

Starlight Gowns are softer, provide more coverage, movement, and a better fit than a regular hospital gown.



Socialization

The colorful gowns are a conversation starter with everyone from clinical staff to other patients.



Normalization

Familiar characters and kid-friendly designs remind children of comfortable pajamas from home.



Procedural Support

Clinicians can easily perform routine medical procedures with multiple points of access.



Emotional Support

Choosing an outfit provides an outlet for kids to express emotions and identity through their appearance.

Starlight Hospital Wear

Program Overview



Hospital wear is often a source of discomfort for seriously ill children. It leaves them feeling exposed or embarrassed in an already overwhelming situation. The transition from their own clothes to hospital gowns is one of the highest stress moments in a child's hospital journey. Also, traditional hospital gowns do not easily accommodate certain medical procedures or patient needs.

Starlight Gowns™ meet both the functional needs of hospital staff and psychosocial needs of kids. They replace unattractive, uncomfortable, and embarrassing hospital gowns with ones that are high-quality, comfortable, and brightly colored. Starlight Gowns come in a variety of fun designs including superheroes, sports teams, and kids' favorite characters, making them far superior to traditional gowns.

"I had a young 6-year-old child who was extremely anxious to be at the hospital in the first place, and then finding out he had to change clothes made matters a lot more frightening for him. I went into his room and explained how we have a brand-new gown with spaceships on it and that is was just for him. Once the child saw how fun this gown was, he was immediately ready to change and became more compliant and at ease. By seeing him become less anxious, his family members also became calmer. This type of situation happens frequently; therefore, we are so thankful for Starlight!"

—Lexi Little, CCLS, CHRISTUS Shreveport-Bossier Health System

Reach

Since 2016, **256,280 Starlight Gowns** have been distributed to seriously ill children at **389 hospitals and pediatric units** in 48 states.

Program Impact



Comfort

"As a mother to a medically complex child, my main goal is keeping her comfortable in the hospital. These gowns are so soft that I never have to worry! It's like she's wrapped in a blanket!"

—Laurie C., Starlight Mom, Advocate Children's Hospital

- Starlight Gowns have been specifically designed with input from Certified Child Life Specialists and clinicians to ensure that they are softer than regular gowns, provide coverage, movement, accessibility, and fit. These attributes all provide physical comfort to children.



Socialization

- Starlight Gowns feature brightly colored, engaging, and fun designs that provide ongoing opportunities for connection and conversation between children, families, and medical staff.
- 86% of staff reported that Starlight Gowns make it easier for medical staff to build rapport with seriously ill children and their families.¹



Normalization

"When wearing a Starlight Gown, our son's experience during treatments gave color and the feeling of being home. The Starlight Gown gave inspiration to our family. It not only gave an impression and feeling of being home, but it gives an impression of being normal. 'Normal' is a simple word in definition, but to us, it's defines hope, and hope gives you the strength to continue fighting."

—Lovely, Starlight Mom

- 92% of family survey respondents agree or strongly agree that their child feels better about how they look in a Starlight Gown than a traditional hospital gown.¹



Procedural Support

- The average hospital gown does not easily accommodate certain medical procedures, such as connecting IVs or taking X-rays. 86% of families and 87% of staff report that the Starlight Gown's design makes performing these routine tasks easy and efficient for medical staff and less stressful for children.¹



Emotional Support

- *"The gowns have been a great addition as this gives patients comfort and something they can relate to."*

—Jessica Claspill-Garcia, CCLS, Good Samaritan Hospital

- Starlight Gowns become an outlet for children to express their emotions and their identity through play and their appearance.

The Future

- Starlight's ultimate goal is for every hospitalized child to receive a Starlight Gown.
- Starlight plans to add more designs to the collection, in part thanks to the 2019 "My Starlight Gown" contest.
- Starlight aims to partner with iconic kids' brands and sporting teams to provide more style options to pediatric patients.
- Starlight will conduct focus groups with Certified Child Life Specialists and clinicians to determine how to expand into other areas of hospital wear (i.e. pants, socks, blankets etc.).
- Starlight will continue to evaluate the fabric and design of its gowns and garments in order to provide the highest quality comfort, accessibility, and support to children and staff.

¹ Rackow, A., Ishofsky, R., & Ostrow, A. (2018). Starlight Gowns: Pilot Program Research and Evaluation Report(Rep.). WhyWhisper.



Starlight Spaces



Since 1990, Starlight has been transforming hospital spaces into state-of-the-art, interactive, and relaxing environments that can be enjoyed by children and their families. Starlight Spaces improve the psycho-social and emotional wellness of hospitalized kids, teens, and their families by providing a treatment-free space for play, social interaction, and meaningful activities. These playrooms, teen lounges, therapy gyms, healing gardens, and playgrounds offer a variety of diversions, including video games, computers, toys, crafts, music, and best of all, the company of other children.



Since 2003, over

100 Starlight Spaces

have transformed the hospital experience for more than

2.9 million at

90+ children's hospitals & pediatric units

in 26 states.



Starlight will unveil 9 Starlight Spaces by the end of 2019 and 10 new Spaces for 2020.



Play

Having a central location for a variety of toys and games allow children to gather and engage in developmental, therapeutic, and medical play for self-expression and experience processing.



Entertainment

The spaces create a positive experience by combating boredom, enriching choice, and reducing isolation.



Comfort

A medical-free zone allows kids to feel a sense of security and ease in an otherwise stressful environment.



Socialization

Patients and families have an opportunity to connect with each other, their visitors, and other families facing similar circumstances.



Normalization

Environments are specially designed to give structure, familiarity, and security to an unfamiliar, overwhelming, and potentially scary place.



Emotional Support

Fear and anxiety around environmental stressors are reduced when children are allowed a medical-free outlet for their emotions.



Physical Therapy

Clinicians capitalize on motivational therapy by encouraging walks to and from the communal space.

Starlight Spaces

Program Overview



Since 1990, Starlight has been transforming hospital spaces into state-of-the-art, interactive, and relaxing environments that can be enjoyed by children and their families. Starlight Spaces improve the psycho-social and emotional wellness of hospitalized kids, teens, and their families by providing a treatment-free space for play, social interaction, and meaningful activities. These playrooms, teen lounges, therapy gyms, healing gardens, and playgrounds offer a variety of diversions, including video games, computers, toys, crafts, music, and best of all, the company of other children.

"Once you're in the hospital for a couple days, the walls are closing in and you need an escape like the Starlight Space. The new Family Room addresses the needs of all family members, whether they want to read, eat or work and allows them to feel at home."

–Wendy Pauker, Child Life Manager, Banner Thunderbird Medical Center

Reach

Since 2003, **113 Starlight Spaces** have transformed the hospital experience for **2,945,292 million children** at **92 children's hospitals and pediatric units** in 26 states.

Program Impact

Play



- Toys, the playroom, and activities improve the hospital experience for children. Having a space that is easily accessible makes staying in a hospital room close to the area more desirable.
- A child's ability to play in the hospital repairs the discontinuity resulting in their life due to hospital admission and shows somehow that the child may continue their normal life even inside the hospital (Koukourikos et al., 2015).¹



Entertainment

- Starlight Spaces increase entertainment opportunities by providing children with a range of activities and access to state-of-the-art equipment and facilities.
- Children want a diversity of readily available, independently accessible, age, gender, and developmentally appropriate leisure and entertainment facilities seamlessly integrated throughout the hospital environment. Such spaces create a positive hospital experience for children by combating boredom, enriching choice and control, and reducing a sense of isolation (Lambert et al., 2013).²



Comfort

- Once children or families walk into a Starlight Space, they know they are safe from all medical procedures, examinations, medications, and needles especially. Being in a medical-free zone allows individuals to feel a sense of security and ease in a particularly stressful environment.
- Studies confirm that there are spatial enhancers and detractors to a patients' experience of healing beyond the care they are receiving and that patients can identify healing spaces with healing enhancers. A healing space creates a sense of being cared for and reminds one of being home, surrounded by a feeling of comfort and calm (MacAllister et al., 2016).³



Socialization

"It was a blah room, but now it's a wow factor! It really looks like you're in a treehouse! Before, this room didn't get a lot of action. But now, the volume of people coming into the room... it's just so awesome."

—Alyssa Luksa, Director of Child Life and Expressive Therapy, Children's Memorial Hermann Hospital

- Having spaces within the hospital for families to connect with each other, their visitors, and other families facilitates socialization with others facing similar circumstances, reducing feelings of isolation.
- As a result of spending time in a Starlight Space, children can reduce boredom and frustration, and increase their social and creative activities, developing friendships and accomplish new milestones.
- Parents of long-term patients may feel an increased sense of well-being through engagement and be provided with new connections that provide ongoing support.



Normalization

- While healing is complex and multifaceted, the physical space that surrounds us plays an integral role in how we heal. Children's hospitals can ensure that all spaces – from simple waiting rooms to complex surgery suites – are designed to do what's important: assist in the overall healing of a child and get him or her back into the normal routine of life (Macklin, 2014).⁴
- For many sick children, there is healing power in normalcy. Events that healthy children take for granted like watching a movie in a theater, can easily be organized and implemented into the hospital environment (Macklin, 2014).⁴



Emotional Support

- Space and environment can have a positive impact on a child or young person's experience of hospitalization and ultimately their health outcome. A Starlight Space helps in reducing anxiety associated with being in the hospital and improves health and well-being.
- Spending time in a Starlight Space allows for parents to experience relief, feel reassured that their child is happy and gives them an opportunity to share information with other parents and bond with their family.
- Children are given the opportunity to change their attitudes towards hospital and treatment by allowing them to feel more in control and happier about their situation.



Physical Therapy

- Clinicians use the Starlight Space as motivational therapy by facilitating and encouraging walks to and from the patient's room and Starlight Space.

The Future

- Starlight is reimagining its current program so all future Spaces continue to be kid-friendly and inviting environments, while highlighting Starlight's brand.
- Starlight will unveil nine Starlight Spaces by the end of 2019 and will begin working on ten new Spaces for 2020.
- In partnership with Colgate-Palmolive, Terracycle, and CVS, we will grant a grand prize of a Starlight Space playground constructed from recycled materials at a pediatric facility in the state that recycles the most oral care materials.

¹ Koukourikos, K., Tzehe, L., Pantelidou, P., & Tsaloglidou, A. (2015). THE IMPORTANCE OF PLAY DURING HOSPITALIZATION OF CHILDREN. *Materia socio-medica*, 27(6), 438–441. doi:10.5455/msm.2015.27.438-441

² Lambert, V., Coad, J., Hicks, P. and Glacken, M. (2014), Social spaces children in hospital. *Child Care Health Dev*, 40: 195-204. doi:10.1111/cch.12016

³ MacAllister, L., Bellanti, D., & Sakallaris, B. R. (2016). Exploring Inpatients' Experiences of Healing and Healing Spaces: A Mixed Methods Study. *Journal of patient experience*, 3(4), 119–130. doi:10.1177/2374373516676182

⁴ Macklin, L. (2014). *Creating Healing Spaces with Facility Design*. Children's Hospital Association.

Starlight Virtual Reality

Starlight Virtual Reality is a state-of-the-art technology program that radically transforms the hospital experience for kids by transporting them out of the hospital and into a virtual world. It is an engaging intervention that helps decrease anxiety and pain for children, and also provides dynamic content geared toward entertainment and distraction such as virtual snowball fights, immersive field trips to exotic locations, fun video games, and more.

Since 2018, over

1,300 Starlight Virtual Reality headsets

have transformed the hospital experience for more than

18,000 children at

300+ healthcare facilities

in 48 states.



6,970

reported sessions since 2019*

1,383

reported hours of play since 2019*

“

Starlight Virtual Reality has been a game changer at Children's Hospital Colorado. Having an all-in-one system designed specifically to be used in a healthcare setting has accelerated adoption by our institution and multiplied by the number of patients exposed to virtual reality. With a diverse library of games and experiences vetted and ready to go, Starlight Virtual Reality is perfect for procedural support, distraction, mindfulness, and even just for fun!”

—Dr. James Thomas, Pediatric Anesthesiologist, Children's Hospital of Colorado



Play

Virtual reality is a highly interactive experience that engages children through both structured and unstructured activity.



Entertainment

Immersive and stimulating content combats boredom, anxiety, and isolation.



Normalization

Providing activities kids enjoy in their everyday lives helps make an unfamiliar place feel safe and even fun.



Procedural Support

Being immersed in a virtual experience decreases anxiety and stress, making medical procedures less challenging for patients and clinicians.



Emotional Support

The ability for a child to be in control helps reduce anxiety during hospitalization and medical procedures.



Pain Management

Usage can help manage pain and distress associated with a variety of medical procedures by encouraging patients to relax and breathe through the discomfort.



Physical Therapy

Games can provide an opportunity to practice motions that can lead to reports of lower pain levels and an increased range of motion.

Starlight Virtual Reality

Program Overview



Children have always enjoyed games of “pretend.” While immersed in a game, they often become deeply absorbed and are able to ignore aversive stimuli (Won et al., 2017).¹ Starlight Virtual Reality is a groundbreaking, state-of-the-art technology program that radically transforms the hospital experience for kids by transporting them out of the hospital and into a virtual world. It is an engaging intervention that helps decrease anxiety and pain for children, and also provides dynamic content geared toward entertainment and distraction such as virtual snowball fights, immersive field trips to exotic locations, fun video games, and more.

“Starlight Virtual Reality has been a game changer at Children’s Hospital Colorado. Having an all-in-one system designed specifically to be used in a healthcare setting has accelerated adoption by our institution and multiplied by the number of patients exposed to virtual reality. With a diverse library of games and experiences vetted and ready to go, Starlight Virtual Reality is perfect for procedural support, distraction, mindfulness, and even just for fun!”

–Dr. James Thomas, Pediatric Anesthesiologist, Children’s Hospital of Colorado

Reach

Since 2018, **1,371 Starlight Virtual Reality headsets** have transformed the hospital experience for **18,927 children** at **310 healthcare facilities** in 48 states.

Program Impact

Play



- Starlight Virtual Reality is a highly interactive entertainment experience that directly engages children through either structured activity (e.g., games that require children to follow a set of rules and norms) or unstructured “immersive relaxation”.
- Starlight provides seriously ill children with incredible experiences they may not be able to have outside of a hospital. Starlight Virtual Reality does that by delivering games, apps, and learning opportunities that are exclusive to pediatric care.
- Our hospital partners have expressed deep gratitude to Starlight Virtual Reality – the kids receiving treatment in reality can be healers through play in the world of virtual reality. It gives them some control in an uncontrollable situation.
- What we have created through Starlight Virtual Reality will continue to make a difference and bring smiles and delight where there have been sadness and fear.



Entertainment

- Our hospital partners tell us that Starlight Virtual Reality combines the best of two worlds: entertainment and education, making learning fun and a child's stay in the hospital just a little better.
- Starlight Virtual Reality allows children to be completely immersed in content that is age-appropriate, enjoyable, stimulating, educational, and fun to watch.



Normalization

- *"I like that I can be in the ocean without having to be there."* –Zoe, Starlight Kid, 10, Children's Hospital of Colorado
- Starlight Virtual Reality has a normalizing effect on seriously ill children because it helps an unfamiliar and often scary place, such as a hospital, feel safe and fun – or, "normal" – by providing access to the types of games, apps, and activities they're able to enjoy in their everyday life.



Procedural Support

- *"At Gillette Children's Specialty Healthcare, virtual reality has been a fantastic addition for our patients in the clinical setting. In some instances, instead of prescribing medications, we've been able to curb the anxiety and fears our kids typically experience during medical procedures such as blood draws, transfusions, wound cleanings, casting and more. It's a wonderful distraction for kids and parents alike."*
–Chantel Barney, PH. D, Clinical Scientist, Gillette Children's Specialty Healthcare
- Healthcare providers have seen that virtual reality increases procedural cooperation while decreasing anxiety and stress in turn resulting in less challenging and stressful medical procedures (Li et al., 2011).²



Emotional Support

- *"Starlight Virtual Reality puts the children back in control of their care. It's giving them a tool that they can control their level of immersion, instead of feeling like they're having stuff done to them. Any way we can put the kid back in control of their situation—especially with something that's fun—is a win."*
–Dr. Joe Albietz, Medical Director of Child Life, Children's Hospital of Colorado
- The power-differential is clear and felt between patient and provider in a clinical environment. By simply providing developmentally-appropriate choices, anxiety can be reduced, and emotional containment can be provided to a patient (Lerwick, 2016).³



Pain Management

- *"It was such a fun distraction from the hospital. When playing the fishing game and doing the relaxation apps, I did not feel any pain."*
–Tiahna, Starlight Kid, 15, Ann & Robert H. Laurie Children's Hospital of Chicago
- Virtual reality has been used to manage pain and distress associated with a wide variety of painful medical procedures. In clinical settings and experimental studies, participants immersed in VR experience reduced levels of pain, general distress/unpleasantness and report a desire to use VR again during painful medical procedures (Li et al., 2011).²
- Immersive VR is a promising and engaging intervention that may help to decrease pain and anxiety for children undergoing painful procedures and suffering from acute pain (Won et al., 2017).¹



Physical Therapy

- Virtual reality offers an engaging opportunity for children to practice motions that would be impossible or unsafe in the real world (Won et al., 2017).¹
- Patients exposed to virtual reality as a part of their physical therapy report lower ratings of pain and an increased range of motion.

The Future

- Starlight aims to have approximately 2,000 Starlight Virtual Reality headsets in circulation at pediatric facilities across the country by the end of 2019. The ultimate goal is that every children's hospital and pediatric unit is equipped with enough Starlight Virtual Reality headsets to meet their needs. We estimate this to be 4,500 headsets, one for each Certified Child Life Specialist and clinicians who can integrate it at the point of care.
- Starlight is working to create more virtual reality content and launch a companion app that would mirror the VR content to a phone or tablet in order to allow a medical professional or guardian to see, guide, or curate content for the patient.
- Starlight is making advancements in the quality of the experience in order to improve outcomes for patients prone to dizziness and nausea.
- Starlight will continue to work on specialized content creation like 360° custom hospital tours and community/multi-player apps. Starlight's goal is to enable hospitals to create their own VR content (with cameras supplied by Starlight) in order to construct content specific to their facility.

¹ Won, A. S., Bailey, J., Bailenson, J., Tataru, C., Yoon, I. A., & Golianu, B. (2017). Immersive Virtual Reality for Pediatric Pain. *Children (Basel, Switzerland)*, 4(7),52. doi:10.3390/children4070052

² Li, A., Montano, Z., Chen, V J., Gold, J I., (2011). Virtual reality and pain management: current trends and future directions.

³ Lerwick J. L. (2016). Minimizing pediatric healthcare-induced anxiety and trauma. *World journal of clinical pediatrics*, 5(2), 143–150.doi:10.5409/wjcp.v5.i2.143