



Clowning in hospitals

How arts and humour can support
the mental health of hospitalised
children and their parents



Research
Nugget

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Introduction

Staying in hospital or undergoing invasive medical treatments can be a very stressful and frightening experience for both children and their parents. However, due to time constraints and workload in the context of medical care, paediatric patients and their families often receive only little social support.

Healthcare Clowns visiting hospitalised children at their bedsides, providing support by spreading joy and laughter is the most widely practiced clowning format by RED NOSES. More recently, RED NOSES also started to send specifically trained clowns to accompany children before or during invasive medical procedures such as surgeries, blood draws or vaccinations. Through their artistic interventions that evolve around improvised and participatory performances including, i.e., approaches from storytelling, circus, and music, the clowns help children to cope better during these potentially stressful situations.

This Research Nugget collates scientific evidence, highlighting the versatile positive impacts Healthcare Clowning can have on the physical and mental well-being of children in hospitals and their parents.

What inspired this Research Nugget?

Over the last few decades, an increasing number of professionally trained clown artists have entered hospital wards in many different countries. During these visits, they have spread humour, laughter, and positive emotions to patients in need of joy, providing them with a change to their daily hospital routines and relief from their health-related concerns. In parallel, research has also picked up on this topic and investigated the impact of Healthcare Clowns on the physical and emotional well-being of children in hospitals and their caregivers.

In this Research Nugget, we highlight research findings that demonstrate the positive impact Healthcare Clowning can have for paediatric patients and their caregivers either in the context of bedside visits or clowns accompanying young patients before or during invasive medical procedures.

In the first section, we describe how hospitalisation and dealing with a life-threatening diagnosis can impact the mental health and well-being of child patients and their parents, showing how important it is to provide them with support during these difficult times. Thereafter, we will introduce Healthcare Clowning as a form of art that supports well-being and mental health. Subsequently, we will provide a short description of the different clowning formats RED NOSES provides in the context of hospitalization and medical treatments. The main part of this Research Nugget will collate research findings on the impact of clowns' bedside visits, and of clowns accompanying children before or during medical procedures or invasive treatments. Moreover, we will summarise the impact of Healthcare Clowning on parents or caregivers of sick children.

Some of the key findings presented in this Research Nugget:

- 1) Healthcare Clown visits to the bedside of hospitalised children **can reduce their anxiety, distress, and pain**. Furthermore, they bring moments of relief and joy, and provide an escape from health-related concerns.
- 2) Similarly, when children can interact with Healthcare **Clowns before or during invasive medical procedures, their anxiety and distress decrease**. Consequently, they can better cooperate with medical staff throughout the treatment.
- 3) The presence of Healthcare Clowns in hospital wards **benefits the parents** of sick children by providing a feeling of relief when they see their children experiencing positive emotions, or by enjoying the clown activities themselves.





Hospital stays can affect the mental health of children and their parents

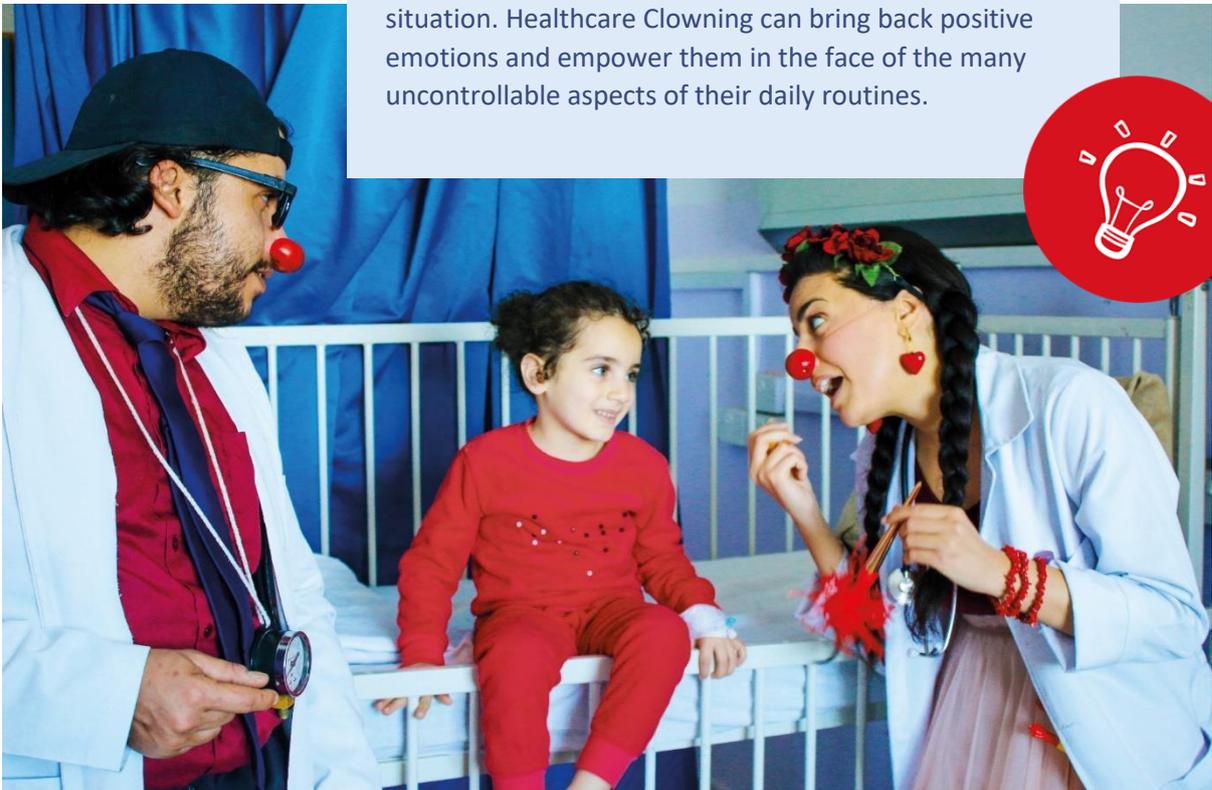
Many children struggle to cope with the hospital environment and medical treatments, which can involve pain, confusion or loss of control when being exposed to unfamiliar environments and procedures, as well as anxiety due to being separated from their families^{1,2}. Hospitalised children often feel scared, alone, angry, sad, and bored³. The hospital experience may lead to Paediatric Medical Traumatic Stress, which can have long-term effects on a child's physical and mental health^{4,5}.

A review of 28 published studies showed that when admitted to paediatric intensive care units, up to 28% of children experienced a deterioration of their emotional well-being after they were discharged. They became more anxious and experienced lower self-esteem and self-confidence⁵. Children with severe diseases, such as cancer, particularly suffer from impaired mental well-being: a study from the Shahid Beheshti University of Teheran, Iran, demonstrated that phobia, enuresis, obsessive-compulsive disorder, and separation anxiety were the most prevalent mental health issues in children with this diagnosis⁶. Similarly, a study from the University of Hong Kong, China, showed that children in oncology wards have high levels of anxiety and show depressive symptoms, sadness, and worry⁷. Repeated hospitalisation can significantly lower children's ability to cope with stressful situations in hospital and the recall of positive thoughts⁸. Several authors concluded that there is a need for better support for hospitalised children to help them to cope with the emotional, psychological, and physical challenges of this life-threatening disease^{3,7,8}.

Not only long-term stays in hospital can affect children's well-being. Short invasive procedures such as surgeries⁹, treatments such as vaccinations or blood drawing¹⁰, or medical checks such as EEG or MRI scans¹¹ can also trigger anxiety and stress. This can often lead to less cooperation between children and hospital staff, eventually delaying or prolonging the procedure, making the process more difficult, or even impairing the quality of diagnostic measures^{11,12}.

Parents of sick children are also strongly impacted by their child's diagnosis or hospital treatment. For example, parents of children diagnosed with cancer struggle with frightening and unfamiliar treatment procedures and the uncontrollable situation¹³. A review of 24 research articles showed that parents oftentimes suffer from acute stress disorder (up to 63%) when children are diagnosed with severe diseases such as cancer, type 1 diabetes, trauma, or severe injuries that required hospitalisation¹⁴. But, even after successful treatment, parents can struggle with finding their way back to normalcy and dealing with their emotional scars¹³. It was shown that up to 68% of parents suffer from post-traumatic stress disorder after the medical treatment or hospitalisation of their child¹⁴. Some authors emphasise that there is an unmet need for psychosocial support for parents of hospitalised children^{13,14}. Such support is not only necessary to relieve immediate stress but could also reduce the occurrence of long-term negative mental health consequences¹⁴.

Our conclusion: children in hospitals, be it for short procedures or in the context of longer-term hospitalisation, as well as their parents, are in need of support that can help them to cope with this stressful situation. Healthcare Clowning can bring back positive emotions and empower them in the face of the many uncontrollable aspects of their daily routines.





Healthcare Clowning

As a form of art for well-being

Throughout previous decades, humour has been recognised as a crucial component of mental and physical health¹⁵. Having humour at its core, Healthcare Clowning has greatly developed as a professional artistic discipline. Specifically trained clowns collaborate with healthcare institutions to improve the well-being of children and their parents in hospital settings. By bringing joy and laughter to hospital wards, Healthcare Clowns help children and their parents to better cope with stress, anxiety or pain and create a safe space where people feel comfortable showing their emotions, from joy to sadness¹⁶⁻¹⁸.

In 2019, the World Health Organization published a Health Evidence Report with the aim to collate research findings that demonstrate the beneficial impact of arts engagement in the context of health management and treatment of illness. According to the report, arts activities can **counteract feelings of loneliness or lack of social support**; they can **support emotional regulation**, which is an important prerequisite to manage mental health; they can **moderate depression, anxiety, and pain perception**; and they can **support the rehabilitation process** after surgical procedures, for example, by enhancing positive emotional states and even decreasing side effects¹⁹.

RED NOSES offers different Healthcare Clowning formats, each of which has an impact on the mental health and well-being of hospitalised children and their parents. In the following sections, we will describe these formats and their aims, to provide the reader with a glimpse into the versatile contexts in which Healthcare Clowns provide support for hospitalised children and their parents.

Format descriptions

Bedside Visits

During bedside visits, a clown duo makes a round in paediatric oncology, coma, and rehabilitation wards, as well as intensive care or transplant units. The clowns approach patients either in their rooms or in community areas in the hospital wards. During these visits, the clowns engage with the patients in a joyful and humorous way. Clown interventions draw from a vast repertoire of artistic formats: music, magic, circus art, storytelling, pantomime or improvisation, depending on the needs of the target audience. During visits at the bedside, children are encouraged to return to their natural playfulness and provided with the much-needed impetus for self-confidence and experiencing positive emotions.



Circus Patientus

This format was specifically developed for long-term paediatric patients. For many long-term patients, the daily focus lies predominantly on their illness and treatments, which can have a negative impact on, for example, their self-confidence, cause feelings of inadequacy or the development of depressive symptoms. In the context of Circus Patientus, RED NOSES sends a team of specifically qualified clowns to hospital wards who co-create a whole circus show with the child patients over the course of a week. The participants acquire new artistic skills, can tap into their creativity, and work together with others to reach a joint goal. The aim is to enable the children to feel empowered, stimulated, and re-focus on their talents and abilities, providing them with the opportunity to engage with others, and bring back the lightness of childhood and of joyful playing.



Intensive Smile

In the Intensive Smile format, a Healthcare Clown accompanies young patients either before or during intensive or invasive medical procedures such as examinations, treatments, or surgeries. The clowns' presence is designed to inspire a calm atmosphere, reduce anxiety or fear, and diverting the focus away from the medical procedure. This aims to increase the emotional well-being of children during a potentially frightening experience by offering a fun, playful, and engaging experience. Moreover, clowns closely collaborate with medical staff and become a partner to the doctors and other staff involved in the treatment. By increasing the staffs' awareness of the beneficial impact of humour and play in the context of medical treatments, clowns help to create a more supportive medical environment where more empathetic communication with people in need is fostered.



Scientific evidence on the impact of Healthcare Clowning during bedside visits

The visits of Healthcare Clowns at children's beds in hospitals have been shown to improve children's moods, decrease their levels of depression and fear, as well as make children less worried about their hospitalisation. Parents and hospital staff across different studies agree that such clown visits boost children's morale, reduce their stress, and stimulate their imagination²⁰⁻²⁴. In a study conducted at the University of Tasmania, Australia, it was found that child patients perceived the visits of Healthcare Clowns as moments of fun and magic, allowing them to escape from the concerns regarding their acute medical conditions. Parents and staff described that clown visits cheered the children up, that they were less tense, and seemed relieved²⁵.

A study from the Philipps University in Marburg, Germany, investigated whether clowns' bedside visits can increase the psychological and physical well-being of children who had to stay in hospital for at least one night. The findings showed that the well-being of both the children and their parents increased when visited by clowns when compared to a control group without clown visits. The research team assessed whether these positive effects would also be detectable four hours after

the clown visit. However, this effect was not found in a follow up examination four hours later²⁶. To better understand the relationship between short-term and potential long-term effects of Healthcare Clowning interventions, more research is needed.

The beneficial impact of Healthcare Clowning can also be traced on a physical level. A study conducted at the São Paulo State University and the Paediatric Ward of the Botucatu Medical School Hospital in Brazil investigated whether clown visits affect the hormonal stress response of children with acute pathology. By comparing the levels of the stress hormone Cortisol before and after the clown visits, they were able to show that clown interventions significantly reduced the children's physiological stress response²⁷.

Furthermore, bedside visits of Healthcare Clowns can positively impact the healing and recovery process. A study conducted in the Paediatrics Department of San Camillo Hospital in Rome, Italy, found that children with respiratory pathologies (e.g., pharyngitis, tonsillitis, tracheitis, pneumonia, or bronchitis) reported a decrease in pain perception and healed faster when visited by clowns than children without clown visits²⁸.



The impact of clown visits in the context of medical procedures and treatments

Impact on children's anxiety, distress, and perceived pain

The presence of Healthcare Clowns before or during different medical procedures or invasive treatments (e.g., surgeries, dental procedures, intrathecal chemotherapy, allergy prick skin tests, intravenous cannulation, or venous blood drawing) can have a beneficial impact on children and improve their experience of these treatments. Multiple research studies concluded that the presence of clowns decreased children's anxiety, distress, perceived pain, and the time they spent crying. Moreover, the presence of clowns decreased the time children spent in medical care²⁹⁻³⁸. Two studies, one from Tel Aviv University in Israel and one from Meyer Children's Hospital in Florence, Italy, were able to demonstrate that clown interactions can be even more effective in reducing anxiety before anesthesia than anxiolytic medical treatment (e.g., midazolam)^{39,40}.

Some medical interventions carry a particularly high risk of traumatising a child, such as anogenital examinations for children who have been sexually abused. Clowns can also help in this situation. A study showed that the presence of clowns during these exams reduced children's fear and pain, and they had less intrusive thoughts of their previous experiences of sexual assault⁴¹. For children who are about to undergo a particularly intimate procedure such as penile surgery, interacting with clowns has been shown to significantly decrease anxiety⁴².

Interactions with a clown not only decrease negative feelings but can also increase positive feelings and children's well-being. Several studies were able to highlight that children who engaged with a Healthcare Clown before a surgery felt happier, calmer, and less worried than children who did not



interact with a clown^{29,43-46}. A recent Israeli study examined interactions with clowns at the onset of oral immunotherapy. During this therapy, children who are allergic to specific food are required to eat an increasing amount of this food following a medical protocol. This can be a very scary experience due to the fear of having an allergic reaction. The interaction with Healthcare Clowns can positively impact this therapy process and increase children's perceived quality of life during this time⁴⁷.

Impact on patient-medical staff relationship

The hospital context can be scary and upsetting for children. Being in an unfamiliar environment and undergoing painful procedures carried out by strangers can prove challenging. Many children are nervous or anxious and behave frantically during medical procedures, which can, in the worst case, make it difficult for the children to comply with the medical procedures.

A study from the University of Florence, Italy, showed that clowns can be alternatives to pharmacological sedation for children who must sit still during magnetic resonance imaging (MRI). Interacting with clowns, dogs, or musicians 20 minutes before an MRI significantly reduced children's anxiety and fear and made it less likely that the children needed sedation⁴⁸. Similarly, a study conducted at the Bnai Zion Medical Center, Haifa, Israel, reported that the presence of Healthcare Clowns during electroencephalography (EEG) increased the children's cooperation and thus the quality of the EEG recording¹¹. Interactions with Healthcare Clowns can also increase child patients' compliance during burn dressing changes, as studies from the Assiut University, Egypt, and the University of Vic, Spain, showed^{49,50}.

A study from the Ben-Gurion University of the Negev in Israel demonstrated that Healthcare Clown interventions can also help to reduce aggressive tendencies, especially among children and adolescents who undergo medical treatment. Young patients reported lower negative affection and lower tendency to act aggressively⁵¹. This can have a beneficial effect on the relationship between medical staff and patients, making the work of healthcare staff easier, and the whole patient experience more positive.

Parents also benefit from Healthcare Clowning

In this section, we draw together scientific evidence showing that not only paediatric patients benefit from clowning interventions, but that it can also have a beneficial impact on their parents.

A study conducted by the National Taiwan University in Taipei specifically assessed the impact of clown interventions on parents whose children undergo cancer treatment. By assessing the psychological distress of parents through questionnaires, they were able to summarise that Healthcare Clowning in this treatment context had two ways in which it impacted parents. First, parents' emotions improved when seeing that their children enjoyed the clowning intervention (indirect impact); and second, by enjoying the clowning interventions themselves (direct impact)⁵². Similarly, another study showed that the positive impact of clown interventions on parents' mood can be stronger than when children watched videos or listened to a story²⁴.

The presence of Healthcare Clowns can impact parents not only during bedside visits, but also during invasive medical treatments or surgery. Several randomised controlled trials and meta-analyses highlighted that parents felt significantly less anxious or stressed before and after their children underwent invasive medical procedures and surgeries when clowns were present^{9,37,38,53-56}.

Besides quantitative and experimental studies, qualitative studies were also conducted, interviewing parents or inviting them to discuss their perception of Healthcare Clowning in small groups. A qualitative study found that the parents' focus also shifted from their child's illness and that the clown visits provided a topic that parents, children, and medical staff could talk about together. Another finding of this study was that parents also enjoyed the clown performances and laughed during the clown visits and felt relieved to see that their children were happy²⁵. In line with





these findings, an interview-based study from the Netherlands Institute for Health Services Research in Utrecht found that parents appreciated the distraction Healthcare Clowns provided from their child's medical condition⁵⁷. Another interview-based study that assessed parents' perception of clowning interventions in the context of palliative care showed that parents perceived Healthcare Clowning predominantly positively. For the participating parents, clowns represented the "funny side of life", created "good memories", and brought "life and (...) vital disorder" in these difficult times⁵⁸. Taking these findings together, we can summarise that Healthcare Clowning interventions can also support parents of hospitalised children, or children who are undergoing invasive medical treatments to find moments of relief and connect to positive emotions.

Conclusion

In the case of illness prevention or treatment, medical interventions and hospitalisation are often necessary. For children and their parents, undergoing invasive medical procedures, or spending time in hospital can be scary and distressing; which, in the worst case, also negatively impacts their mental health. Arts for well-being, including Healthcare Clowning activities, can support children and parents during these difficult situations.

This Research Nugget has compiled scientific evidence showing the impact of Healthcare Clowning in hospitals and how their interventions can support the mental health of hospitalised children and their parents. Healthcare Clowns visiting bedsides or accompanying child patients in the context of intensive or invasive medical procedures were shown to decrease anxiety, distress, pain perception, and to increase positive emotions and collaboration during these procedures. Such beneficial

effects were also found for children’s parents, who reported decreased anxiety and distress, and felt relieved by seeing their children enjoying the clowning interventions.

Providing supportive hospital environments to child patients and their parents is important, as it increases short-term well-being which can positively affect treatment adherence as well as the recovery process. Moreover, single studies have shown that positive experiences during a medical treatment can even have a positive effect on the experience during following treatments. Consequently, we want to conclude this publication with several recommendations for policy makers, hoping that they can support our endeavour to provide social support to child patients and their parents.

Recommendations

Based on the positive impact Healthcare Clowning can have in supporting the mental health of hospitalised children and their parents, we strongly advise policy makers to:

- Recognise the available evidence regarding the contribution that professionally trained Healthcare Clowns make in healthcare settings.
- Emphasise the importance of the arts, including Healthcare Clowning, in managing illness by providing multimodal psychosocial support for hospitalised children and their families.
- Create relevant frameworks that allow for a more structured and closer cooperation between hospitals and Healthcare Clowning organisations at eye-to-eye level.
- Cooperate across sectors on policy level to allow for innovative and holistic approaches that benefit the health and well-being of patients.
- Collaborate with healthcare institutions and regional structures to systematically include artistic and humorous approaches into healthcare strategies.
- Integrate workshops on the use of humorous and creative approaches, for example, the RED NOSES Humour in Healthcare Workshops, for medical students and healthcare staff to support the creation of a more patient-centered, child-friendly, and supportive hospital environment. For details of the RNI workshop programs please see: <https://www.rednoses.org/what-we-do/capacity-building-training/>
- Provide funding for scientific research, so that the impact of the arts for well-being, including Healthcare Clowning, can be further investigated.



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