



## AN EXAMPLE OF SOCIAL RESPONSIBILITY IN THE PEDIATRIC PRE-SURGICAL PROCESS: LUCAS AND THE MAGIC THREAD

### Un ejemplo de responsabilidad social en el proceso prequirúrgico pediátrico: Lucas y el hilo mágico

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#### Abstract

Any hospital surgical process generates anxiety in the patient. Especially if they are pediatric patients. The case presented is the result of an agreement between the Hospital 12 de Octubre from Madrid, the Faculty of Psychology of the UNED, and an Innova-Docencia project of the Complutense University of Madrid, in collaboration with Theodora Foundation and Medicina TV. It shows a CSR experience in the aforementioned Hospital, which aims to convert the perception of the traumatic situation of a surgical intervention into a positive experience for children and adolescents. An experience in which communication is the fundamental tool. The audiovisual narration of a story transforms the child's perception of the surgical process. Thanks to the viewing of a video in which some clowns narrate the story of "Lucas and the magic thread", and to the decoration of walls and ceilings, furniture and doors, in the corridors and rooms leading to the operating room, the child is able to perceive the whole process as a journey that he always makes accompanied by Lucas. All this is intended to reduce the anxiety of the pediatric patient and his

family, as well as to reduce the pain sensation the patient feels. In short, achieve that the hospital surgical process is perceived by the pediatric patient as a positive experience.

**Keywords:**

Social responsibility, Patient-centered care, Hospitals, Pediatric surgery, Anxiety, Pain.

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**Resumen**

Todo proceso quirúrgico hospitalario genera ansiedad en el paciente. Especialmente si se trata de pacientes pediátricos. El caso que se presenta, fruto de un acuerdo entre el Hospital 12 de Octubre de Madrid, la Facultad de Psicología de la UNED, y los proyectos Innova-Docencia de la Universidad Complutense de Madrid, en colaboración con la Fundación Theodora y Medicina TV, muestra una experiencia de RSC en el citado Hospital, que pretende convertir la percepción de la situación traumática de una intervención quirúrgica en una vivencia positiva para las niñas, los niños y los adolescentes. Una experiencia en la cual la comunicación constituye la herramienta fundamental. Mediante la narración audiovisual de un cuento se transforma la percepción que el niño tiene del proceso quirúrgico. Gracias a la visualización de un vídeo en el que unos payasos narran la historia de “Lucas y el hilo mágico”, y a la decoración de paredes y techos, enseres y puertas, en los pasillos y salas que dirigen al quirófano, se logra que el niño perciba todo el proceso como un viaje que realiza siempre acompañado por Lucas. Con todo ello se pretende disminuir la ansiedad del paciente pediátrico y de sus familiares, así como reducir la sensación de dolor del paciente. En definitiva, lograr que el proceso quirúrgico hospitalario sea percibido por el paciente pediátrico como una vivencia positiva.

**Palabras clave:**

Responsabilidad social, Atención centrada en el paciente, Hospitales, Cirugía pediátrica, Ansiedad, Dolor.

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## 1. INTRODUCTION

It should be remembered that:

It is only possible to think of the humanisation of healthcare within the epistemological framework of excellence in relations with the public, and always within the framework of unavoidable patient-centred care. Humanisation is a basic and essential principle of hospital work and represents a value that is part of the most basic precepts of social responsibility in healthcare. Humanisation is key in the relationship with people who feel insecure due to health issues. (Lamouret and García-Nieto, 2020, p. 191).

Any surgical operation is a traumatic situation. Even more so if we take into account that the intervention usually takes place after a previous process of loss of physical and psychological well-being, which, in turn, increases the risk of psychological vulnerability, especially in the case of children and adolescents.

The surgical process is usually remembered as a negative experience that leaves its mark on our right hemisphere, specifically in the limbic system where all traumas and abandonment are found, especially in early times. From the neuropsychological point of view, some authors agree that it is in the amygdala where memories of intense emotional content are found. And it is in the amygdala

where they are consolidated, rather than in the hippocampus (temporal lobe) and frontal cortex (Echeburúa and Amor, 2019).

Furthermore, preoperative anxiety, an undesirable emotional state, arises when the patient is aware that he or she is going to undergo an anaesthetic-surgical procedure. Uncertainty in the face of an unknown situation causes the intervention to be perceived as a threat or a possible risk. This circumstance is exacerbated in paediatric patients, who are particularly vulnerable to high levels of preoperative anxiety due to their physiological and psychological peculiarities and different levels of cognitive development according to age.

The main triggers of anxiety are as follows:

- Lack of understanding of the situation.
- Fear of parental separation.
- Fear of pain.
- Fear of losing control.
- Fear of a strange environment.

Current scientific evidence shows a clear association between high levels of preoperative anxiety and higher postoperative anxiety, higher analgesic needs and lower levels of postoperative cooperation (Jia Shermin et al., 2012). Furthermore, in childhood, high preoperative anxiety is associated with a higher incidence of delirium on awakening, as well as sleep disturbances, changes in established behavioural patterns, and developmental setbacks. And these changes may be sustained weeks or months after surgery (Fortier and Kain, 2015).

An adjusted analysis of the perioperative psychological impact during infancy requires consideration of the parents. Firstly, because they constitute the human context of reference and emotional security for children. Especially when the paediatric patient is younger. Mothers and fathers have an essential role as promoters of their children's well-being and as shock absorbers of their psychological distress in the perioperative stages.

Secondly, because the loss of well-being of children, and in particular illness and surgery, also impacts on parents. Appropriate coping with this parental discomfort is one of the keys to their ability to cushion the child's experience of vulnerability, fear and stress. It should not be forgotten that the fear of adults can be transferred, explicitly or implicitly, to their children, increasing their sense of distress.

These advances in knowledge contribute to an awareness of the need to promote the psychological well-being of children and their mothers and fathers throughout the perioperative process. Thus, in addition to the usual administration of anxiolytic drugs in the immediate preoperative period, different non-pharmacological anxiety management strategies have been used with very different results. However, no single measure seems to have a relevant effect on the others when applied in isolation, and they are only effective at certain stages of the surgical process (admission, anaesthetic induction...) (Leroy et al., 2016).

The most commonly used non-pharmacological measures are: the presence of a family member, usually the mother and/or father; the presence of clowns; the use of video games; low sensory stimulation; and the use of virtual reality.

Therefore, in order to achieve an effective improvement in the experience of the surgical process in paediatric patients and their families, non-pharmacological strategies should be used in a continuous, complementary and global manner (Manyande et al., 2015; Kain, et al., 1998), following the following criteria:

- Maintain continuity in its use throughout the surgical process, from admission to discharge.
- Use different strategies that are adapted to each of the stages of the surgical process.
- Use different strategies according to the cognitive development of the child.
- Ensure family-centred care, providing parents with tools that allow them to collaborate in the management of their own and their child's anxiety.
- To provide healthcare staff with the knowledge and strategies that will enable them to intervene on the child's anxiety, both directly and with the collaboration of the parents.

In short, it is all about patient-centredness,

A certain form of relationship between healthcare staff and patients, more sensitive to their needs, preferences and values, when making decisions, prescribing and applying care and treatment. Patient-centred care can only be conceived from a biopsychosocial perspective, overcoming exclusively biomedical schemes, and based on a bond of trust between patient and doctor (King & Hope, 2013; Stewart, 1995, 2001; Greene et al., 2012; Lamouret & García-Nieto, 2020, p. 191).

Given the scientific evidence, and taking into account that the culture of corporate social responsibility is in the DNA of the 12 de Octubre Hospital in Madrid, a project is justified with the general objective of improving psychological care and the experience in the paediatric perioperative intervention process, from a systemic and ecological perspective, from the psychological point of view. It is a comprehensive strategy that involves multiple agents and intervenes from different approaches. The focus is always on people, children and adolescents, parents or responsible adults, and professionals. All of this with an essential tool: communication.

## **2. OBJECTIVES. A PROCESS OF EXPERIENTIAL CHANGE IN A PAEDIATRIC SURGICAL SITE**

The 12 de Octubre University Hospital stands out for its commitment to society, especially to its reference population. Its degree of involvement goes beyond its own healthcare activity. This commitment involves, among other things, a sincere concern for the paediatric patient's experience of surgery, which leads us to recognise the importance of the environment in improving the emotional experience of children and adolescents before and after surgery. An improvement that translates, on the one hand, into an increase in psychological well-being, a decrease in anxiety and the avoidance of postoperative delirium in the child. And, on the other hand, in the well-being and better coping on the part of the relatives of their children's surgical experience. All this will result in better and more effective strategies of accompaniment throughout the surgical hospital process, with attention focused on the well-being of paediatric patients, their families and professionals.

In this context, two lines of improvement in the quality of patient care guide our proposal:

- a.- The implementation of a Plan for the Humanisation of Healthcare 2016-2019 (Directorate General for Humanisation and Patient Care, 2016), promoted by the Regional Ministry of Health of the Community of Madrid, whose general objective is to bring patient care closer to the patient and avoid the cold perception that users sometimes have of medical professionals.
- b.- To be a socially responsible hospital that responds to a strategy of commitment to society. One of the hospital's objectives is to promote leadership and a commitment to social responsibility with the reference population and with society.

With these bases, we set out to design the work plan and during the first quarter of 2019, in the paediatric surgery area, we began to outline the lines of intervention in relation to the entire paediatric surgical process. The process was analysed and organised into stages, as units of analysis and intervention, recognising the importance of each one of them. And, from a holistic and systemic perspective, the strategies and interventions were integrated as part of a more global process, relating each of the stages to the previous and consecutive ones.

In 2019 this project was approved by the Management of the 12 de Octubre University Hospital, although its implementation was postponed due to the Covid-19 pandemic.

This article describes the first part of the project, which consists of the design, planning and implementation of its initial phase, with different interventions aimed at reducing anxiety in child and adolescent patients, and their families, in the paediatric surgical process at the Hospital Universitario 12 de Octubre in Madrid.

The main objective of the project is to contribute to increasing the humanisation of the paediatric surgical process, reducing the anxiety experienced by paediatric patients and their families. To achieve these objectives, specific measures are proposed, including the transformation of the paediatric surgical space, the incorporation of a programme of accompaniment with clowns, and a series of interventions with professionals.

Overall objective:

To reduce the emotional impact of surgery on paediatric patients at the 12 de Octubre University Hospital Madrid. Transforming the lived experience.

Specific objectives:

- a) To reduce the anxiety of paediatric patients and their relatives.
- b) To ensure that the paediatric patient's attention is centred on a story told in the form of a fairy tale.
- c) To make the experience a positive one.
- d) To reduce the paediatric patient's sense of pain.

### 3. MATERIALS AND METHODS

The project is aimed, on the one hand, at the internal interest group made up of the centre's professionals, both in the day hospital, operating theatre and hospitalisation. And, on the other hand, the external stakeholders made up of paediatric patients and their families. Thus, the scope and application of the project involves all professionals involved in the paediatric perioperative process.

The programme will apply to:

- Children and adolescents in scheduled morning and afternoon surgery without admission.
- Children and adolescents admitted to hospital wards.

Urgent surgeries and patients admitted to Critical Care and Neonatal Units would be excluded from this project, given the particular conditions of these services

In order to carry out the project, a group of professionals involved in the project is formed: Head of Paediatric Anaesthesia Service, Head of Paediatric Surgery Service, Head of Paediatrics Service, Deputy Director of the mother and child area, Deputy Director of Nursing of the surgical block, supervisor of hospitalisation and of the surgical area and Head of Corporate Social Responsibility Service. In short, the directorates involved are: Planning, Medical, Nursing and Management Directorates.

Alliances are created with two non-profit organisations that collaborate with the Hospital's CSR Service, specifically with the Theodora Foundation and Medicina Televisiva. Several meetings were arranged to establish channels of collaboration. The representatives of the Theodora Foundation proposed a story entitled "Lucas and the magic thread", the development of which could be implemented as an entertainment tool during the pre-surgical process. Medicina Televisiva, for its part, will make a video in which two clowns from the Theodora Foundation tell the story.

**Figure 1.** *Clowns of Theodora narrating the story "Lucas and the magic thread".*



**Source:** *Television Medicine.*

The spaces of the pre-surgical circuit transformed into a stage for the representation of the story, and the narration of the story itself, will accompany the paediatric patient on their journey. Always in compliance with patient safety protocols throughout the process.

But the staging of the story does not end at the doors of the operating theatre, it continues even in the surgical area, with illustrative vinyls visible to the patient at all times, and from the entrance to the area, to the Post-Anaesthesia Recovery Unit (URPA).

**Figure 2.** *Presentation of "Lucas and the Magic Thread".*



**Source:** Own elaboration.

To this end:

- a) The story of "Lucas and the magic thread" is used as a unifying element in the development of distraction tools adapted to the paediatric patient: videos, stories, electric cars, wall decorations, personalised music, medals.
- b) The "Dr. Smile Accompaniment Programme" is set up in collaboration with the Theodora Foundation.
- c) Establishment of a system of information and training for family members in the use of these distraction tools.
- d) The presence of the family member, generally the father or mother, is encouraged during the anaesthetic induction.

Throughout the perioperative process, the paediatric patient's anxiety is monitored, and the impact of the measures introduced on the improvement of their well-being and that of their family is analysed. In this way, it will be possible to measure the effects that the distraction tools implemented in each of the stages of the surgical process have on the paediatric patient:

- a. Day hospital.
- b. Inpatient ward. Surgical area information system new triptych.
- c. Transfers.
- d. Pre-anaesthesia area.
- e. Post-anaesthesia Recovery Unit (URPA).

**Figure 3.** Circuit of the intervention process of the project "Lucas and the magic thread".



**Source:** Own elaboration..

In order to carry out the project it is necessary to:

- The training of health personnel in the use of distraction tools with the child and/or family members.
- The incorporation of volunteers from the Theodora Foundation.
- The preparation of the surgical checklist.
- The assessment by the nursing staff at the time of admission.

And the following support material is required:

- Information posters on the floors and in the surgical area.
- Information cards for accompanying adults, girls and boys.
- Printed stories of Lucas and the magic thread.
- Video of the story for children up to 12 years old.
- Information video for adolescents, over 12 years old.
- Decoration of the walls of the surgical area.
- Electric car for transfer in the surgical area.
- Headphones and music players in the operating theatre.
- Medals for bravery in the URPA.
- Wifi network.
- Pain and anxiety scales.

### 3.1. Description of the process

#### 3.1.1. Reception of the scheduled patient

The day before surgery, a personalised welcome programme is set up for paediatric patients and their parents, with scheduled admission.

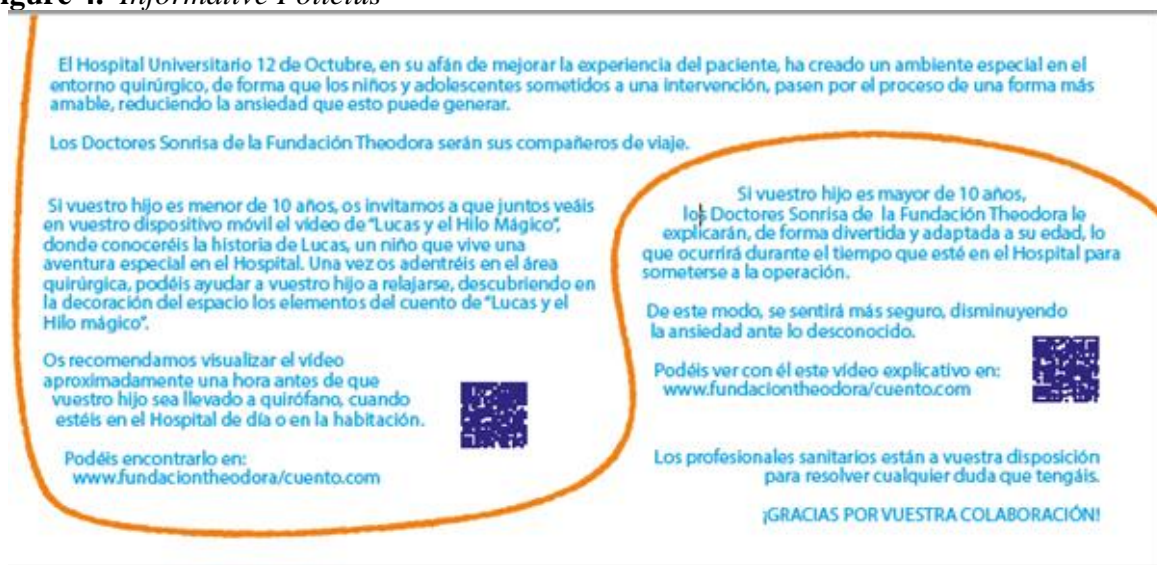


When a child arrives at the hospital and is requested to be admitted to Admitting, the person responsible for this service notifies the wardens, who notify the afternoon supervisor (the usual admission time for these patients). The supervisor gathers the newly arrived children and their families in a classroom, where she makes a welcoming presentation. She begins by introducing herself as the person in charge of the unit and then provides them with information about the hospital, the floor where they will be admitted and the services available in the hospital. At the end of this presentation, time is dedicated to answering questions and resolving all doubts, both from the children and the adults. Afterwards, the supervisor accompanies them and introduces them to the nursing staff.

At this welcome, they are given the information sheet on "Lucas and the magic thread" and are encouraged to download the video onto their mobile devices, thanks to the QR code on the card they have been given.

Two videos have been made, one for children and one for teenagers. They are encouraged to watch it before going to the operating theatre.

**Figure 4.** *Informative Folletus*



**Source:** Television Medicine.

**Figure 5.** *Cover of the story "Lucas and the magic thread"*



**Source:** Theodora Foundation

### **3.1.2. At the time of admission to the plant**

It proceeds to:

- Identification of the patient and fitting of the patient's identification bracelet.
- Assessment by the nursing staff
- Transfer and accompaniment to the room
- Verification of possible studies pending (analyses, crossmatches, etc.) and treatment to be carried out, prior to the intervention.

### **3.1.3. At the Day Hospital**

It proceeds to:

- Reception of the patient by the nurse and the TCAE (Auxiliary Nursing Care Technician).
- Identification of the patient (checking the bracelet).
- Nursing assessment; taking of vital signs, verification of the planned surgical procedure; operating theatre number; fasting condition; and allergy control.
- Information about the process, delivery of the Lucas story card and explanation of the download to see the story.
- The surgical patient is accompanied by the orderly and the family member to the pre-anaesthesia area.

### **3.1.4. In the Surgical Block**

The operating theatre orderly is in charge of transferring the patient to the surgical area from the pre-anaesthesia area. The orderly will also take the surgical scheduling report to check, together with the ward nurse, the correct identification of the patient. All in accordance with the Standards and Recommendations of the Spanish Ministry of Health (2009).

On arrival in the administrative area of the paediatric surgical block, the orderly instructs the family member to wash their hands and put on their tights and gown. The patient will be offered the hydroalcoholic solution for hand hygiene. On arrival at the surgical area, the paediatric patient and their relatives can already see Lucas, the protagonist of the story, at the entrance door. The doors open automatically and the paediatric patient enters a waiting area with images on the ceiling and walls depicting the story of the video they have just seen.

**Figure 6.** *Entrance to the surgical area*



**Source:** Own elaboration.

a. In the pre-anaesthesia room

After the reception of the patient and his/her family member by the nurse and the auxiliary nursing care technician (ANC), the following is carried out:

Nursing assessment according to the protocol. Identification of the patient (wristband check), verification of the planned surgical procedure and operating theatre number. Checking the patient's fasting status. Check for possible allergies. Isolation. Check for crossed blood if applicable. Check vascular accesses. Pharmacological pre-medication, as indicated by the anaesthesiologist. Placement of cap and removal of pyjamas, if necessary. All of the above, providing the child with the emotional support he/she needs, stressing the Lucas programme and the magic thread, among other possible tools.

Afterwards, it will be necessary the participation of the patient and the family, together with the surgical team, in phase 1 of the checklist. The pre-anaesthesia nurse will notify the surgical team. In this space, the paediatric patient can play with different entertainments in order to distract him/her, for example, looking for a phonograph in the decoration or practising some word search games.

**Figure 7.** *Paediatric pre-surgical area*



**Source:** Own elaboration.

In the event that the anaesthesiologist so indicates, the family member may accompany the patient to the operating theatre, for which the patient will be provided with the appropriate surgical gown.

The orderly, after checking with the pre-anaesthesia nurse the patient's identity with a double confirmation, and accompanied by the TCAE of the pre-anaesthesia area, will transfer the patient to the operating theatre. During the transfer, the orderly and the TCAE will continue with the distraction programme based on the story of "Lucas and the magic thread". To do so, they will refer to the ceiling decoration, with images of different musical instruments (a lady violin on the ceiling), and that of the walls, with the painting of a city representing the village Do, Re, Mi, Fa, Sol with instruments that sing and dance with it.

**Figure 8.** *Lucas arriving in the village: villa Do, Re, Mi, Fa, Sol*



**Source:** Own elaboration

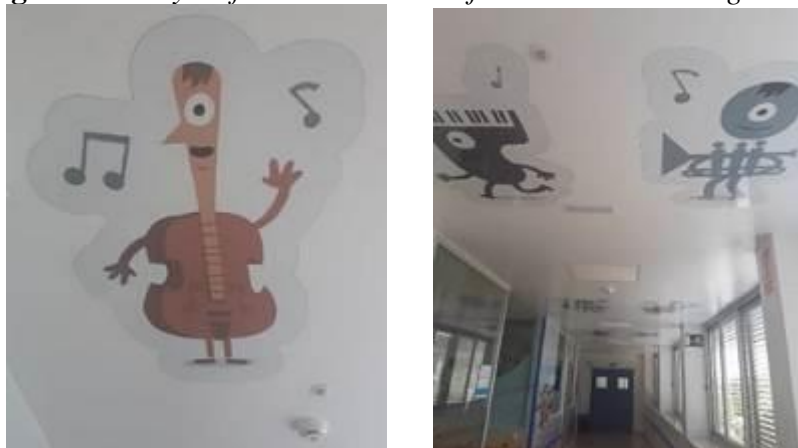
**Figure 9.** *Doctor Sonrisa in the town square, with the band*



**Source:** Theodora Fundation.

On the ceiling the child can see the same instruments that appeared in the video, when Lucas meets Doctor Smile in the villa singing to the accompaniment of the piano.

**Figure 10.** *Vinyls of the instruments of "Lucas and the magic thread"*



**Source:** Own elaboration.

The anaesthesiologist, together with the nurse, will assess the possible transfer of non-pre-medicated children by electric car from the pre-anaesthesia room to the operating theatre.



**Figure 11.** *Car for transferring paediatric patients to the operating theatre.*



**Source:** Own elaboration.

b. In the operating theatre

The orderly, together with the team, places the patient on the operating table, where he/she will be under the direct control of the circulating nurse at all times until the child falls asleep.

And, depending on the type of sleep induction, the child will be provided with some material for auditory distraction.

Once the surgical field is in place, Phase 2 of the checklist is performed.

At the end of the surgery, phase 3 of the surgical checklist is performed.

When indicated by the anaesthesiologist, the circulating nurse will notify the orderly for the transfer of the patient to the PACU or ICU-ARU, as appropriate. If the patient is transferred to the ICU-ARU, this Unit will be previously notified with the relevant clinical information. And the orderly shall be informed of the necessary material for such transport. In this case, the anaesthesiologist, the anaesthesia nurse or the circulating nurse, and the orderly shall transport the child.

In the event that the patient is transferred to the Post Anaesthesia Recovery Unit (PACU), the orderly will be informed of the need, or not, of additional material for the transfer. The anaesthesiologist together with the orderly and the circulating nurse will carry out the transfer.

At the same time, the surgeons in charge will inform the relatives in the room located at the entrance of the surgical block.

c. Post-anaesthesia Recovery Unit (URPA).

On arrival, the patient will be monitored and stabilised. The decoration of this space is very calm and tranquil, with colours that transmit serenity, harmony and peace.

**Figure 12.** *Post-anaesthesia Recovery Unit (PACU)*



**Source:** Own elaboration.

Following the established protocol, two family members shall be notified to accompany the patient at all times.

When the anaesthesiologist signs the discharge report, the orderly will be notified and together with the TCAE will transfer the patient to the ward. On leaving the URPA, the parents and the child will be able to see Doctor Smile and Lucas who will say goodbye to them.

The patient will be given a personalised "medal of courage" with his or her name on it. And this closes the circuit and the process.

**Figure 13.** *URPA exit door*



**Source:** Own elaboration.

## 4. RESULTS

### 4.1. Actions undertaken

- The paediatric surgical space has been remodelled to adapt it to the current needs of the internal stakeholders, the professionals in the surgical area, as well as external stakeholders such as patients and relatives.
- The surgical area has been transformed, from the entrance to the URPA area, by covering the walls, ceilings and corridors with vinyl.
- The story of "Lucas and the magic thread" has been adapted to the conditions of the surgical area.
- Two videos of the story have been filmed, one a children's version and the other for teenagers.
- A space has been allocated to park the donated cars, so that they can be used by the paediatric patients.
- Parents have been given cards so that they can download, with the QR code, the videos corresponding to the story of Lucas and Hilo Mágico.
- All professionals have been informed and involved in the project, seeking a commitment from everyone.

### 4.2. Follow-up

- Anxiety and pain management monitors for children have been designed.
- Satisfaction surveys have been designed for internal and external stakeholders.
- Although only a small number of paediatric surgical procedures have been monitored to date, with all the tools to distract the attention of paediatric patients and their families, information has already been collected on their degree of satisfaction, with very positive results.

## 5. CONCLUSIONS

The purpose of this project is to ensure that all paediatric patients undergoing surgery at the 12 de Octubre University Hospital have a positive surgical experience. An objective that responds to the corporate social responsibility policy of commitment to society, specifically with the patients and families of this Hospital. Transforming the traumatic situations of all paediatric patients into positive experiences is a real milestone for the Hospital as a socially responsible organization.

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Rubio Pascual, P., Díaz-Oliver Fernández-Hijicos, A. M., Sierra García, P., García Nieto, M. T., & Vinagre Gaspar, R.

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