

Is there a role for clowns in paediatric intensive care units?

Guillaume Mortamet,^{1,2} Nadia Roumeliotis,³ Florence Vinit,^{4,5} Caroline Simonds,⁶ Laurent Dupic,¹ Philippe Hubert¹

¹Pediatric Intensive Care Unit, Hôpital Necker, Paris, France

²Université de Montréal, Montréal, Québec, Canada

³Pediatric Intensive Care Unit, CHU Sainte-Justine, Montreal, Québec, Canada

⁴Department of Psychology, Université du Québec à Montréal, Montréal, Québec, Canada

⁵Organization 'La Fondation Jovia', Montréal, Québec, Canada

⁶Organization 'Le Rire Médecin', Paris, France

Correspondence to

Dr Guillaume Mortamet, Department of Pediatric Intensive Care Unit, Necker Hospital, 89 av Zola, Paris 75015, France; mortamet@hotmail.fr

Received 7 July 2016

Revised 8 December 2016

Accepted 16 January 2017

ABSTRACT

Hospital clowning is a programme in healthcare facilities involving visits from specially trained actors. In the paediatric intensive care unit (PICU), clowning may appear inappropriate and less intuitive. The patient could appear too ill and/or sedated, the environment too crowded or chaotic and the parents too stressed. Relying on our experience with professionally trained clowns both in France and Canada, the purpose of this article is to offer a model for hospital clowning and to suggest standards of practice for the implementation of clowning in PICUs. In this work, we provide a framework for the implementation of clown care in the PICU, to overcome the challenges related to the complex technical environment, the patient's critical illness and the high parental stress levels. Regardless of the specifics of the PICU, our experience suggests that professional clown activity is feasible, safe and can offer multiple benefits to the child, his/her parents and to hospital personnel. Due to the specific challenges in the PICU, clowns must be educated and prepared to work in this highly specialised environment. We stress that prior to clowning in a PICU, professional performers must be highly trained, experienced, abide by a code of ethics and be fully accepted by the treating healthcare team.

INTRODUCTION

In 2001, the Institute of Medicine released a groundbreaking report recommending that healthcare delivery systems become patient-centred rather than clinician-centred, with decision-making tailored to patients' preference and beliefs.¹ According to the patient-centred and family-centred care concept, now widely accepted in paediatric healthcare, the patient must be considered in the context of his/her family, culture, values and needs, and must be at the centre of his/her care.²

Admission to hospital is recognised as a stressful and difficult time for children and their parents. Addressing children's emotional, social and developmental needs through an artistic dimension has become an integral component of patient care.³⁻⁴ Hospital clowning is a programme in healthcare facilities involving visits from specially trained actors. They are colloquially called 'clown doctors,' which is a trademarked name in several countries.⁵ Hospital clowning was developed in 1986 in New York City by Michael Christensen, a cofounder of the Big Apple Circus. The same year, Karen Ridd, a childlife specialist created the Therapeutic Clown Program at The Hospital for Sick Children in Toronto (more information at <http://www.therapeuticclownsinternational.com/>

about/history/). Based on these two models, clown doctor programmes now operate in many countries all over the world.⁶

On children's wards, clowns use various techniques (eg, magic tricks, gags, games, soap bubbles, dance, songs, stories or even non-verbal scenes), according to the child's age and medical condition. Play may help them deal with the range of emotions they may experience while in hospital: fear, anxiety, loneliness and boredom. In addition, clowning is helpful for the staff and the families of patients,⁵ and this will be detailed subsequently. As opposed to counselling or psychotherapy such as play therapy, hospital clowning does not necessarily require the child's involvement. Due to age and illness-related challenges in communication, the child can more easily be a spectator than an actor. Literature suggests that hospital clowning may limit the negative impact of children's hospitalisation and have positive effects on children by demystifying and distracting from painful procedures, reducing anxiety in stressful situations and providing hope through humour.⁷⁻¹⁵ Clowning in paediatric wards is now considered as a part of whole patient care with programmes involving clowns implemented in a growing number of paediatric hospitals to support children, parents and healthcare professionals.¹⁶⁻¹⁸

In the paediatric intensive care unit (PICU), clowning may appear inappropriate and less intuitive, given the acuity and potential instability of critical care patients in a highly technologically monitored environment. In a previous study, we established that clowning in French PICUs is a very common and worthwhile practice, implemented in some units for over 10 years.¹⁹ To our knowledge, however, there is no literature on barriers or elements facilitating the practice of clowning in the PICU.¹⁹ Relying on our experience with clowns both in France and Canada, where artistic and social values are similar, the purpose of this article is to offer a model for hospital clowning and to suggest standards of practice for the implementation of new clowning in PICUs. Due to the lack of evidence in this field, most of the statements described in this review are opinions regarding our 10 years of experience (Caroline Simonds, one of the authors, started working as a hospital clown in 1988 with The Big Apple Circus Clown Care Unit).

Clowns in PICU: barriers to overcome

Compared with clown care in other settings, such as oncology or haematology units, the intervention of clowns in PICUs is highly specific and is limited by numerous and potentially restraining factors.

To cite: Mortamet G, Roumeliotis N, Vinit F, et al. *Arch Dis Child* Published Online First: [please include Day Month Year] doi:10.1136/archdischild-2016-311583

Barriers in the ICU environment

In the PICU, the patient's room is often filled with a multitude of very specialised space-occupying technical medical equipment, such as infusion pumps, ventilators or dialysis machines. Moreover, the equipment is often bulky and noisy, creating depersonalising conditions that can be unfavourable for clowning. The space is often limited to the end, or side, of the bed as opposed to using the entire room. The PICU nurse also works in close proximity with the patient, and the bedside is where the vast majority of his/her tasks are carried out. Clowning therefore could also be perceived as an invasion of their workspace.

Furthermore, patients in the PICU are particularly susceptible to nosocomial infections, in part due to the use of invasive devices, and/or to an immune dysfunction increasing infection rates in this critically ill population.^{20 21} Due to the prevalence of multidrug resistant organisms, a key priority for the PICU care team is protecting susceptible young patients from hospital-acquired infections.²² Standard and enhanced infection control methods have been implemented in many PICUs, including basic hand hygiene and contact precautions. In this environment, every member of the staff, including clowns, can be a potential source and route of transmission.

Barriers due to the critically ill patient or specific situations

PICUs admit children from newborns to 18 years of age for a wide variety of medical conditions: monitoring after complicated surgeries, single or multiorgan system failure (cardiac, respiratory, neurological, etc) or serious trauma.²³ These critically ill patients require serial monitoring in dedicated and highly specialised units.^{24 25}

Due to their fragility, the medical condition of a patient admitted to the PICU can also deteriorate abruptly, becoming critical and requiring immediate intervention from the staff. In this environment, some care teams in the PICU could consider clown care as disturbing or burdensome, due to the severity and acuity of the patient's underlying disease.⁷

Furthermore, mechanically ventilated children admitted to the PICU receive sedative and analgesic infusions to reduce anxiety, promote comfort and improve ventilator synchrony.²⁶ Sedation may limit the child's interaction with the environment, and clowns could appear unnecessary and superfluous.

Moreover, in some severely or chronically ill children, curative therapy may be futile and comfort care may predominate. Clowning at the bedside of a patient at the end of life, or following the disclosure of bad news, may be considered unsuitable or unreasonable. In this setting, even the presence of the clowns, reflecting joy and laughter, could be considered as disturbing for parents and healthcare professionals.

Despite all these barriers, our experience and our collaboration with French and Canadian clown organisations such as 'Le Rire Médecin' or 'La Fondation Jovia' suggest that hospital clowning can be reasonable in the appropriately outlined setting. Clowns can lighten and humanise patient interaction in the often hostile PICU environment.

Importance of training

Ongoing and site-specific training is a key prerequisite to clown care in the PICU in order to ensure professionalism and high clinical standards among hospital clown organisations (box 1).^{5 27 28} Little is known about the clown skills required to work in a PICU; however, our experience has provided us with the ability to highlight certain points. In 2011, 'Le Rire Médecin' created a 700-hour training programme for clowns to acquire the specific practical and theoretical knowledge needed

Box 1 Key points for successful clown implementation in the paediatric intensive care unit

1. Clowns meet with team before intervening
2. Intervention must be age-sensitive and illness-sensitive
3. Clowns must be well trained for acute care patients
4. Clowns should be musically trained
5. Clowns must have improvisation skills
6. Clowns should work as a duo

for hospital care (more information available at <http://www.leriremedecin.org/nos-actions/institut-de-formation/formations-des-comediens.html>). From a medical standpoint, the training programme allows clowns to acquire basic information regarding the specifics of critically ill patients, main diseases or diagnoses encountered in PICUs and the uniqueness of the environment. The medical clown also needs to learn how to gather the information about the patient from the physician/nurse, in order to choose the right patient for the intervention. Indeed, similar to other patients in the hospital setting, not every child is receptive to clowning. To address the issue of nosocomial infections, clowns are trained in specific hygiene measures, and their intervention in the child's room involves specific hygienic guidelines and protocols.

From an artistic point of view, clowns in PICU should be versatile artists adapting rapidly to the child and his family.⁵ In order to appropriately make contact with the patient and their family, the clowns must skilfully improvise their approach at the bedside (like improvising dances, songs, stories or even non-verbal scenes). Their improvisation skills are mandatory when working in highly technical environments, where clowns take advantage of the surrounding medical devices, such as playing with alarms or other ambient sounds.

Interestingly, the highly unconventional and medicalised patient room forces the theatrical stage to extend beyond the bedside, to the hallway or waiting room, for example. These spaces are intermediate areas between the 'stressful' unit and the 'normal' world where clowns can more easily foster their healing and playful interaction with parents.

Music skills are highly valued as a key aspect of clown's intervention. The major advantage is the accessibility music provides to a large variety of children's ages and medical conditions.

Moreover, due to the technical and artistic challenges of medical clowning in PICU, working in teams of two clowns is strongly recommended.²⁹ A duo encourages creative performance and a diverse exchange between clowns, freeing the children from the pressure of actively participating. The duo also provides a mutual support for the performers who can witness tragic or psychologically difficult situations.

Meeting with healthcare professionals before rounding

Prior to clown rounds in the unit, we suggest that they first meet a doctor or a nurse to obtain a brief medical history, social situation and the emotional needs of each patient. This step is absolutely necessary to adequately plan and address each child's psychosocial needs in the most suitable setting. From our experience, given the high adaptability of clowns, we suggest only two clinical entities that should be considered as a contraindication to clowning. The first is acute unstable pulmonary hypertension, and the second is acute intracranial hypertension, both of which can be worsened by agitation or stimulation. In

order to limit the high, potentially harmful stimuli for these patients, a clown visit is not justified. To date, however, evidence to support this statement is lacking.

Medical clowning's role for PICU patients

Medical clowning to reduce pain and stress

Admission to the critical care unit can be a traumatic experience for children and their families, and the presence of clowns can reduce associated stress and the after effects of hospitalisation.^{12 15 18} The playful distraction clowns offer may be an alternative to sedative medications to reduce anxiety related to hospitalisation and parental absence, although this has never been reported. Clowns may provide a humorous distraction during medical procedures and examinations.

The amount of sedation in patients admitted in PICU is problematic.³⁰ In an attempt to limit sedation use, guidelines supporting non-pharmacological interventions to maintain patient comfort have been established for critically ill patients.³¹ Within critical care, alternative methods to reduce anxiety have been studied.^{10 32} Chlan *et al*³³ demonstrated that music therapy helped reduce anxiety and sedation exposure among mechanically ventilated children. Given this literature, and the high rate of music use by clowns as we described, one might expect that music and clowning may reduce sedation exposure and improve patient well-being in the PICU. Moreover, Schechter³⁴ showed that among non-pharmacological interventions, distraction is most efficient for children under 7, and that inclusion and participation are inversely related to pain perception. In our experience, a sedated child is not a barrier for a clown visit in the PICU, given that in most cases the goal of the sedative medication is not deep sleep. Optimal sedation is described as a level of sedation at which the patient can be easily aroused, free from pain and anxiety.³¹ Except for extreme situations, these children are generally drowsy, but able to communicate.³⁵ Moreover, our clinical observations suggest that children maintain a desire to play and laugh even in stressful environments.

Medical clowning for less critically ill patients

Not all patients hospitalised in the PICU are sedated, and a certain proportion of them are awake and alert, either waiting for discharge, needing ongoing medical monitoring or therapies only provided in critical care units. In these easier clinical situations, the child may welcome the clowns, and clowning may be similar to clown care on medical wards. In this situation, the level of acuity of the patient is reduced, and the amount of equipment and the stress of parents is decreased, leading to reduced barriers or the clowns' intervention.

Medical clowning for children with chronic conditions

Children suffering from chronic illnesses, often used to long-term hospitalisations, make up the remaining proportion of PICU inpatients.¹⁷ Recognising a clown from a previous visit, or from the medical ward, can provide reassurance, relaxation and enhanced trust between clowns and chronically ill children.⁶ Added to the short-term benefits of the clowning (reduced pain and stress and distraction), their implication and care are also important in the long-term psychosocial well-being of the child.^{7 36}

Medical clowning to support parents

Integrating a family-centred care approach in an intensive care unit (ICU) is strongly encouraged by critical care organisations.² Parents of critically ill children also need ongoing support, and

clowns have the skills to distract, relieve and even entertain worried parents.

In our experience, unless the situation is highly critical with a risk of imminent death for their child, most parents are generally receptive to the moral support provided by the clowns, particularly when parents know the clowns due to longer hospitalisation.⁵ As Wólyniez demonstrated, the parental anxiety was reduced when a clown was present during their child's venipuncture.⁹ Clowns and healthcare professionals can easily identify receptive families due to their positive reaction upon the first encounter, and their reaction rarely depends on the child's level of illness in our experience. In the PICU, clowns offer parents a break, lessen their anxiety and humanise care with a brief moment of laughter with their child.^{27 28} Moreover, at the bedside, as most of the clowns have experienced, some parents may even take part in the play, enhancing the positive effects of the clown's intervention on the child.

Parents whose children cannot be visited by the clowns due to an exam or a procedure can nonetheless be supported. The clowns usually make a playful appearance in the ICU waiting rooms where some bored and worried families can gather for hours.

Play for healthcare professionals

The positive effect of clowning on healthcare professionals should not be overlooked or understated. ICU staff members face daily suffering, long work hours and high stress situations, which can be psychologically draining. Even when experienced and dedicated, they are at risk for overattachment, chronic stress and burn-out.³⁷ For many caregivers, the clowns' intervention can be a significant relief, offering them a break with a few moments of laughter and distraction in the day. In a survey administered to healthcare professionals, Koller and Gryski⁵ demonstrated that over half of them considered the clowns as supportive of their work.

Moreover, we observed that the clowns' presence in the unit improves the interaction and communication between the child, his/her parents and the staff members. In our opinion, by taking part in the clowns' play, healthcare professionals may engage children and parents and can demonstrate that the entire healthcare teamwork aspires to the same goals: improving the child's well-being.

CONCLUSION

In conclusion, we have provided a framework for the implementation of medical clowns in the PICU, to overcome the challenges related to the complex technical environment, the patient's critical illness and the high parental stress levels. Regardless of the specifics of the PICU, our experience suggests that professional clown activity is feasible, safe, and can offer multiple benefits to the child, his parents and to the hospital personnel. Due to the above-stated challenges in the PICU, clowns must be educated and prepared to work in this highly specific environment. We stress that prior to clowning in a PICU, professional performers must be highly trained, experienced, abide by a code of ethics and be fully accepted by the treating healthcare team.

Despite the growing number of hospital clown programmes, sometimes included in PICUs, there is a scarcity of research in this field, and the benefits relating to medical clowning have yet to be fully explored. Future studies are needed to assess the impact of medical clowns on children, parents and healthcare professionals as we strive for a medical culture focused on patient-centred care.

Acknowledgements The authors acknowledge all the clowns from 'Le Rire Médecin' Organisation for the daily support provided at the bedside of children.

Contributors GM, NR and FV drafted the manuscript, revised it and approved the final version. CS, LD and PH revised and approved the final version of the manuscript.

Funding This project was executed without specific support.

Competing interests None declared.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- Institute of Medicine Committee on Quality of Health Care in A. *Crossing the quality chasm: a new health system for the 21st century*. Washington DC: National Academies Press (US). Copyright 2001 by the National Academy of Sciences. All rights reserved. 2001.
- Davidson JE, Powers K, Hedayat KM, et al. Clinical practice guidelines for support of the family in the patient-centered intensive care unit: American College of Critical Care Medicine Task Force 2004–2005. *Crit Care Med* 2007;35:605–22.
- Meert KL, Clark J, Eggly S. Family-centered care in the pediatric intensive care unit. *Pediatr Clin North Am* 2013;60:761–72.
- Meert KL, Schim SM, Briller SH. Parental bereavement needs in the pediatric intensive care unit: review of available measures. *J Palliat Med* 2011;14:951–64.
- Koller D, Grysic C. The life threatened child and the life enhancing clown: towards a model of therapeutic clowning. *Evid Based Complement Alternat Med* 2008;5:17–25.
- Oppenheim D, Simonds C, Hartmann O. Clowning on children's wards. *Lancet* 1997;350:1838–40.
- Vagnoli L, Caprilli S, Messeri A. Parental presence, clowns or sedative premedication to treat preoperative anxiety in children: what could be the most promising option? *Paediatr Anaesth* 2010;20:937–43.
- Golan G, Tighe P, Dobija N, et al. Clowns for the prevention of preoperative anxiety in children: a randomized controlled trial. *Paediatr Anaesth* 2009;19:262–6.
- Wolyniez I, Rimon A, Scolnik D, et al. The effect of a medical clown on pain during intravenous access in the pediatric emergency department: a randomized prospective pilot study. *Clin Pediatr (Phila)* 2013;52:1168–72.
- Hatem TP, Lira PI, Mattos SS. The therapeutic effects of music in children following cardiac surgery. *J Pediatr (Rio J)* 2006;82:186–92.
- Viggiano MP, Giganti F, Rossi A, et al. Impact of psychological interventions on reducing anxiety, fear and the need for sedation in children undergoing magnetic resonance imaging. *Pediatr Rep* 2015;7:5682.
- Mansson ME, Elfving RN, Petersson C, et al. Use of clowns to aid recovery in hospitalised children. *Nurs Child Young People* 2013;25:26–30.
- Tener D, Lev-Wiesel R, Franco NL, et al. Laughing through this pain: medical clowning during examination of sexually abused children: an innovative approach. *J Child Sex Abuse* 2010;19:128–40.
- Kocherov S, Hen Y, Jaworowski S, et al. Medical clowns reduce pre-operative anxiety, post-operative pain and medical costs in children undergoing outpatient penile surgery: a randomised controlled trial. *J Paediatr Child Health* 2016;52:877–81.
- Meiri N, Ankr A, Hamad-Saied M, et al. The effect of medical clowning on reducing pain, crying, and anxiety in children aged 2–10 years old undergoing venous blood drawing—a randomized controlled study. *Eur J Pediatr* 2016;175:373–9.
- Gulati G, Novero A, Loring SH, et al. Pleural pressure and optimal positive end-expiratory pressure based on esophageal pressure versus chest wall elastance: incompatible results. *Crit Care Med* 2013;41:1951–7.
- Edwards JD, Houtrow AJ, Vasilevskis EE, et al. Chronic conditions among children admitted to U.S. pediatric intensive care units: their prevalence and impact on risk for mortality and prolonged length of stay*. *Crit Care Med* 2012;40:2196–203.
- Devictor D. [Clowns in pediatrics]. *Arch Pediatr* 2015;22:1–3.
- Mortamet G, Simonds C, Hattab A, et al. [Clowns in the pediatric intensive care unit in France]. *Arch Pediatr* 2015;22:718–23.
- Hatachi T, Tachibana K, Takeuchi M. Incidences and influences of device-associated healthcare-associated infections in a pediatric intensive care unit in Japan: a retrospective surveillance study. *J Intensive Care* 2015;3:44.
- Muszynski JA, Nofziger R, Greathouse K, et al. Early adaptive immune suppression in children with septic shock: a prospective observational study. *Crit Care* 2014;18:R145.
- McGrath EJ, Asmar BI. Nosocomial infections and multidrug-resistant bacterial organisms in the pediatric intensive care unit. *Indian J Pediatr* 2011;78:176–84.
- Au AK, Carcillo JA, Clark RSB, et al. Brain injuries and neurological system failure are the most common proximate cause of death in children admitted to a pediatric intensive care unit. *Pediatr Crit Care Med* 2011;12:566–71.
- Moerer O, Plock E, Mgbor U, et al. A German national prevalence study on the cost of intensive care: an evaluation from 51 intensive care units. *Crit Care* 2007;11:R69.
- Stauffer UG. How to build up an intensive care unit. *Indian Pediatr* 1975;12:291–4.
- Hartman ME, McCrory DC, Schulman SR. Efficacy of sedation regimens to facilitate mechanical ventilation in the pediatric intensive care unit: a systematic review. *Pediatr Crit Care Med* 2009;10:246–55.
- Ford K, Courtney-Pratt H, Tesch L, et al. More than just clowns—Clown doctor rounds and their impact for children, families and staff. *J Child Health Care* 2014;18:286–96.
- Barkmann C, Siem AK, Wessolowski N, et al. Clowning as a supportive measure in paediatrics—a survey of clowns, parents and nursing staff. *BMC Pediatr* 2013;13:166.
- Linge L. Hospital clowns working in pairs in synchronized communication with ailing children. *Int J Qual Stud Health Well-being* 2008;3:27–38.
- Ista E, van Dijk M, Gamel C, et al. Withdrawal symptoms in critically ill children after long-term administration of sedatives and/or analgesics: a first evaluation. *Crit Care Med* 2008;36:2427–32.
- Jacobi J, Fraser GL, Coursin DB, et al. Clinical practice guidelines for the sustained use of sedatives and analgesics in the critically ill adult. *Crit Care Med* 2002;30:119–41.
- Southby HV. A personal reflection: tactile music therapy at night for patients on ECMO in the pediatric intensive care setting. *Dimens Crit Care Nurs* 2006;25:172–4.
- Chlan LL, Weinert CR, Heiderscheid A, et al. Effects of patient-directed music intervention on anxiety and sedative exposure in critically ill patients receiving mechanical ventilatory support: a randomized clinical trial. *JAMA* 2013;309:2335–44.
- Schechter NL. Management of pain in children. *Aust Paediatr J* 1989;25:1–2.
- Weinert CR, Calvin AD. Epidemiology of sedation and sedation adequacy for mechanically ventilated patients in a medical and surgical intensive care unit. *Crit Care Med* 2007;35:393–401.
- Felluga M, Rabach I, Minute M, et al. A quasi randomized-controlled trial to evaluate the effectiveness of clowntherapy on children's anxiety and pain levels in emergency department. *Eur J Pediatr* 2016;175:645–50.
- Embricaco N, Papazian L, Kentish-Barnes N, et al. Burnout syndrome among critical care healthcare workers. *Curr Opin Crit Care* 2007;13:482–8.