Rigshospitalet
Mary Elizabeths Hospital | Rigshospitalet for Children, Teens, and Expecting Families

Abstracts for posters and short poster pitches submitted to the international symposium: "PREPARE" (Play, Rights, and Experiences in Pediatric cARE) November 18th, 2024, Copenhagen, Denmark

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1. Movement after an operation – the sooner the better

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Background: For many children waking up after an operation and being in pain is a fright. Children and parents become insecure and afraid that the pain means something has gone wrong. The reaction is that the child lies still and waits for the pain to disappear. Unfortunate, as the evidence indicates the opposite. I have developed a card with exercises that the child can do when waking up after the operation without necessarily having seen a professional yet. They will receive the card either upon admission or al- ready during the prior admission interview. The hypothesis is that by guiding through the first difficult movement, they find it easier to get out of bed, thereby reducing the risks that exist with immobilization. **Aim:** Developing a professionally relevant, intuitive, and playful tool that the children/families can use during hospitalization to reduce pain and increase activity and functional level. **Design:** Implementation Frontrunner Project prepared in an interdisciplinary environment in preparation for the new children's hospital. Built on empirical data, cases, questionnaires. **Materials/Methods:** Children/adolescents at the pediatric orthopedic surgery department. Questionnaires: doctors, nurses, physiotherapists' opinions on the value and suitability of this project. **Results:** Development and integration of training cards and posters. **Conclusion:** The project has begun implementation at our department and are tested on various children and adolescents after surgery. It´s a great help for rapid mobilization and has also proven useful for e.g., showing foreign-language children what's going to happen. Several other departments have shown interest in the card.

2. Gamification in audiology

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Hearing examination of young children can be challenging since an accurate diagnosis requires active participation from the child. Audiologists are trained at using play in the examination to make the child feel safe and motivated. Still, a child can feel overwhelmed by the sound box, the white smocks and the clinicians touching their ears, when using insert phones. In an ongoing project we investigate if an application with aspects of serious gaming in a playful way can help children aged 2-5 years and their parents to prepare for the hearing examination. By use of positive re-enforcement, the child will have positive expectations to the hearing examination. In the app "Warble til høreundersøgelse" the child meets the little teddy bear Warble, who is going to the hearing examination. The child plays through the hearing test and helps Warble with different tasks. A key word in the development of the app has been co-creation, and involvement of all stakeholders (audiologists, children and their parents) has been fundamental during the entire development process. The app has just been implemented at the audiological department and until summer 2025 the app will be evaluated with focus on children's participation and parents' and audiologists' satisfaction with the app and the hearing examination. Preliminary findings indicate that an application with aspects of serious gaming can be a fun and effective way to prepare children for the hearing examination**. Take-home message**: Always actively involve clinicians and children when developing solutions for them to ensure the relevance and value of the solution.

3. Exploring motivation for engaging in exercise during the first six months of childhood cancer treatment: a qualitative study

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Background/Aim: Early initiation of exercise programs is needed to limit physical deterioration caused by inactivity and treatment-induced toxicities during childhood cancer treatment [1-3]. We aimed to improve our understanding of what influences motivation of children and adolescents diagnosed with cancer to engage in exercise during the first six months of treatment. **Materials/Methods:** Qualitative design using semi-structured interviews with children (6–17 years) diagnosed with cancer (n=12) and their parents (n=12). A deductive thematic analysis based on self-determination theory was applied**. Findings**: Three predefined themes described different aspects of motivation for exercise during treatment. Amotivation: Treatment-related illness and fatigue, causing amotivation, was a dominant barrier. Exercise driven by negative reinforcements facilitated short-term engagement but was perceived as amotivation. Controlled Regulation: Exercise regulated by physiotherapists could facilitate and introject positive experiences with exercise and create confidence in physical capabilities. Autonomous Self-Regulation: An autonomy-supportive approach using co-creation and age- appropriate, treatment-regulated exercise facilitated trust and confidentiality with physiotherapists. **Conclusion:** Motivation for exercise is a dynamic interplay influenced by treatment, parents, peers, and external regulation. Interventions should use an individual, autonomy-supportive approach, encompassing treatment-related variations in physical capacity. However, externally regulated motivation can facilitate short-term exercise when children are sedentary or hesitant to engage. **Take-home messages:** A clinical environment should reinforce physical exercise, offer supervised exercise, and use an autonomy-supportive, age-appropriate approach. For sedentary or reluctant children, a more external regulatory approach may help but should aim to introject and internalize behavior.

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4. Auditory Verbal Therapy as an integrated playful part of the hospital treatment for children with hearing loss

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Copenhagen Hearing and Balance Center, Rigshospitalet, offers three years of Auditory Verbal Therapy to all children with hearing loss following medical-surgical and technical intervention. Auditory Verbal Therapy (AVT) is a well-documented and now established parent-oriented educational method that supports children with hearing loss and their families to develop listening and spoken language. AVT coaches and guides the parents in how to stimulate the auditory centers in the brain in a playful and natural manner, so the child gets the optimal benefit of their hearing technology. The families come to AVT sessions at the hospital once or twice a month for around 3 years and every session is planned around playful activities that can easily be transferred and integrated into their daily life. All activities are functional and fitted to individual needs of the child and family. AVT is, therefore, a family-centered educational intervention and the child and the family play an active part because parents are the experts on their own child. Children with hearing loss come to the clinic for livelong treatment with hearing technology. Since 2023 AVT has become an integrated part of the intervention for children with hearing loss in Denmark underlining that technology cannot stand alone. This has been proven and documented in several research projects showing that prior to AVT only 30% of children with hearing loss reached age equivalent language levels when starting school, whereas after 3 years of AVT it is now 83%. This significant improvement has an obvious positive impact on the individual child's possibilities to reach their maximum potential but also an important positive impact on society in general.

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5. Earnormous: An Educational VR Game About How Humans Hear

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Background/Aim: Virtual Reality (VR) is emerging as a powerful educational tool. This study explores the efficacy of Earnormous, a VR game designed to teach adolescents about the anatomy and functionality of the ear, especially focusing on those with hearing impairments. The goal is to provide an engaging, interactive experience that enhances understanding of hearing loss and auditory function. **Materials/Methods:** The game was developed in collaboration with the Copenhagen Hearing and Balance Centre at Rigshospitalet. It allows users to explore the ear's outer, middle, and inner sections through interactive missions. Two participants, one with hearing impairment and one without, were evaluated using pre- and post-game quizzes and semi-structured interviews to assess knowledge acquisition and user experience**. Findings:** Both participants showed an increase in post-test quiz scores, indicating potential learning. However, one participant experienced some cybersickness during the VR experience. Technical challenges and the small sample size limit the generalizability of these findings. **Conclusion:** While the preliminary results suggest that Earnormous may enhance learning, further testing with a larger group is necessary to confirm its educational effectiveness. **Take-home messages:** VR games like Earnormous hold promise for interactive education, especially for topics like human anatomy.

6. From pacification to participation: Working with Hospital Clowns to minimize the use of anesthesia for children undergoing MRI scanning

Marie Gade Husted, Danish Hospital Clowns (DHC), Michael Haunstrup, Hospital Clown (Theodor), (DHC), Sine Pedersen, Hospital Clown (Sinus), (DHC), Marie Kofod Svensson, Development Consultant, (DHC), Louise Bach, Radiographer, responsible for MRI Development, Aalborg University Hospital (AUH)

Background/Aim: Although WHO emphasizes children's right to information, participation, and play in hospitals [1], children are often put under anesthesia when undergoing MRI scans. Based on the concept of Children Centered Care (CCC) Danish Regions advocate for reducing anesthesia, but the recommendation comes without funding [2]. Inspired by CCC, AUH and DHC have developed and evaluated a cost-effective approach to minimize the need for anesthesia and create a playful and participatory procedure experience. **Materials/Methods:** Hospital clowns and radiographers co-developed an approach focused on playful environments, participation, and child-centered communication before, during, and after the procedure. 16 children aged 3-11 were included in the pilot-project. The evaluation was based on a questionnaire filled out by radiographers and clowns, five qualitative interviews with parents, a workshop with radiographers and clowns, and registrations by the radiographer. **Findings:** 88 % of the included children completed an MRI scan without anesthesia. Furthermore, the approach gave children and parents an experience of recognition, safety, and personalized care. **Conclusion:** MRI scan was reframed as a collaborative process between radiographers, Hospital Clowns, children, and parents. Paying attention to the children's needs and rights for communication and involvement empowered them and minimized the need for anesthesia. **Take-home messages**: Children can be involved in MRI scans through simple and cost-effective methods, which also makes it a safe and empowering experience for both children and parents. Hospital Clowns can play an important role in introducing playful methods to environment and radiographers.

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7. Digital physical activity monitoring of pediatric oncology patients using augmented reality interactive game elements

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Background/Aim: Each year, about 400,000 children and adolescents globally are diagnosed with cancer [1]. Physical inactivity is a major issue in pediatric oncology, though exercise is known to be safe and beneficial [2]. Research suggests gamified apps can effectively boost physical activity, which is vital for treatment and recovery [3]. This project aims to validate an augmented reality-based tool with interactive game features for monitoring physical activity habits in pediatric oncology patients, tested at the Children's Clinical University Hospital, to support pediatric oncology patient-centered care. **Materials/Methods:** 1. Analysis of scientific literature. 2. Physical activity habit monitoring instrument adaptation and integration in a digital solution with augmented reality-based interactive game elements. 3. Validation of the developed instrument with pediatric oncology patients, and patient's parents or guardians focus groups and interviews. 4. Piloting study of developed instrument. 5. Collected data statistical analysis. **Findings/Hypothesis:** Preliminary findings suggest AR-based games can enhance physical activity and improve patient outcomes. This digital approach is expected to effectively monitor and enhance daily activity in pediatric oncology patients. **Take-home messages:** Though similar research in pediatric oncology is limited, success in other fields using similar tools make us optimistic about the project's potential to significantly benefit these patients.

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8. SoundCubes: An Interactive Training for Sound Localization in Children with Hearing Loss

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Background/Aim: Sound localization is crucial for communication, enjoyment of music, and responding to life-threatening situations [1]. For those with hearing loss, especially single-sided deafness [2], it can be a daily challenge. The prototype SoundCubes helps children (3 to 7 years old) with hearing loss train their perception of sound in space through playful interaction based on musical stimuli. Training can be conducted both in the clinic and at home. **Methods/Materials:** Inspired by an auditory verbal education activity at the Center for Hearing and Balance (CHBC), our system uses SoundCubes units placed around the child and controlled by the therapist or parents. The SoundCubes emit sound stimuli through their loudspeakers, and participants, once they identify the source, pick up the SoundCube they think is playing the song. The SoundCube detects motion and provides positive feedback or encourages them to try again. The system includes up to nine SoundCubes, a controller (Android app), and a micro- computer host device. The controller manages the system, logs participants, and tracks progress, including session data and performance scores. The system is scalable, with the number of SoundCubes adjustable to vary difficulty. **Findings and Conclusion:** The system has been part of a pilot study in the clinic, receiving positive feedback from patients, families, and clinicians. Further investigations into its success in improving sound localization are ongoing, involving children and their families. Sound localization is a primary skill that contributes to a high quality of life, and this prototype aims to help children with hearing loss train it in a playful and engaging manner.

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9. Playful Care: The transformative power of hospital clowning in pediatric care

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Background/Aim: This paper argues that play in pediatric healthcare is often narrowly viewed as a tool for easing medical procedures. This instrumental view of play limits its potential. Aligned with WHO's guidelines on children's right to play during hospitalization [1], we propose the concept of 'playful care' which explores how hospital clowning and play design theory offers new insights into play qualities in the hospital context. **Materials & Methods:** The theoretical concept of 'playful care' builds upon an interdisciplinary synthesis of aesthetics, care and relationality. This is further developed through hospital clowning practices and the concept of 'play orders' [3]. Child-centered and co-creative design approaches are emphasized to gain further insights into how play is experienced by children in hospital settings [2]. **Findings:** The concept of 'Playful care' emphasizes a reciprocal and co-creative approach to care. With this, hospital clowing emphasizes the value of a shared space of engagement by employing humor, vulnerability and spontaneity in the hospital setting. Additionally, we show that 'play orders' must be flexible due to the sensitive context and with child-centered approaches the flexibility can be supported. **Conclusion & Take-home messages:** Hospital clowning has transformative potential by collaboratively creating play experiences with hospitalized children, their families and staff. The 'playful care' concept underscores the transformative powers of play thus advocating for a broader and more nuanced understanding of play's role in healthcare settings.

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10. Digital play and rehabilitation for children and adolescents in hospitals, outpatient departments and rehabilitation centres: a scoping review

Lærke Winther[1], Camilla Milther[1], Sanne Miri Schroll[2], Emilie Tange Nielsen[3], Line Klingen Gjærde[1], Derek John Curtis4, Jette Led Sørensen[1,5], Michelle Stahlhut[6]
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Background/Aim: The growing interest in digital play provides new rehabilitation opportunities for children in hospital settings. No reviews exist on digital play interventions for functional rehabilitation across diagnoses and outcomes. This scoping review aimed to identify and map the characteristics of digital play for functional rehabilitation in hospital settings to inform researchers and clinicians. **Method:** Studies including participants aged ≤18 years investigating digital play and functional rehabilitation in hospital settings were included. Reviews, text/opinion papers, conference papers, case studies, and studies with <five participants were excluded. Five scientific databases were searched, with the final

search conducted in October 2022. **Findings:** Of 13,663 references, 90 studies met the inclusion criteria. Digital play for rehabilitation was used in hospitals, outpatient departments, rehabilitation centres, human movement labs, and homes. Most studies involved neurological conditions. A conceptual framework proposed five categories: 1) traditional gaming platforms, 2) extended reality, 3) robotics and assistive technology, 4) sensors, and 5) rehabilitation systems. 180 outcome measures were reported, one-third of which were unvalidated. Limitations and barriers to implementation were often not reported. **Conclusion:** This review provides an overview to guide healthcare professionals in selecting suitable technology for rehabilitation. It also highlights the need to explore digital play for early rehabilitation in hospitalized children with various conditions. **Take-home messages**: Digital play technologies fall into five categories: traditional gaming platforms, extended reality, robotics and assistive technology, sensors, and rehabilitation systems. Interventions can be used in various clinical settings for patients with different functional challenges. This review offers guidance for clinicians in selecting appropriate technologies.

References:
This study is currently under review.

11. Investigating Challenges in Implementing a Digital Play Intervention in a Complex Organization Across Pediatric Departments: A Feasibility Study

Lærke Winther[1], Michelle Stahlhut[2], Derek John Curtis[3], Christian Have Dall[4,5], Thomas Leth Frandsen[1], Jette Led Sørensen[1,5]
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Background/Aim: Digital games can help motivate and distract patients during painful procedures in hospitals. Future interventions for paediatric hospitalisation should not only distract but also encourage socialisation and physical activity through innovative interactive approaches. This pilot study assessed the feasibility of a non-randomised controlled trial (non-RCT) testing Monster Gardener, a digital play intervention (an app) designed to increase physical activity in hospitalised children and adolescents. **Methods:** The study, conducted from October to December 2023, involved children aged 7–17 and healthcare professionals from four paediatric departments at Copenhagen University Hospital – Rigshospitalet, Denmark. Children were split into intervention and control groups. Data collection included physical activity measurements via accelerometers, app usage, and usability questionnaires. The control group received usual care, while the intervention group played Monster Gardener. The feasibility was evaluated using Bowen et al.'s eight focus areas. **Findings:** Twenty-two children participated. Key findings included: 1) prolonged recruitment due to short hospital stays; 2) coding errors prevented data registration; 3) app incompatibility with some phones and accelerometer discomfort; 4) technical issues limiting app deployment; 5) the app was adaptable across departments; 6) participants were often too exhausted to use the app; 7) additional resources were required for facilitation of app use; 8) inactivity and data loss hindered efficacy testing. **Conclusion:** Monster Gardener showed potential to promote physical activity but was not feasible for an RCT. Organizational, technical, and practical improvements are necessary before further testing. **Take-home messages:** Monster Gardener showed potential but faced significant feasibility challenges. Organizational, technical, and participant-related issues hindered implementation. Future interventions should be simpler and involve end users in their design.

References
This study has been accepted for Open Access publication in Journal of Medical Internet Research – Assistive Technologies and Rehabilitation and will be published in the coming months.

12. Exercise in a suitcase for children and youths

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Background/Aim As pediatric occupational therapists at Rigshospitalet, we often face challenges in finding time to see our patients due to their numerous daily appointments. Therefore, we have developed a new method to implement more exercise even outside regular therapy hours. Our aim is to

motivate and enable more exercise for children and adolescents. The suitcase provides a playful approach to self-training and give children and parents ownership of the rehabilitation process. **Materials/Methods** As part of their rehabilitation program, children and adolescents receives a suitcase. The contents of the suitcase are selected based on the child's activity problems, age, and functional level and consist of: Action Cards with descriptions of different exercises. Relevant tools for the exercises. Markers and stickers to decorate and personalize the suitcase. We now have 16 action cards covering facial exercises, oral motor exercises, and guidance on swallowing pills. The suitcase is given to patients who are assessed to benefit from more exercise and extra motivation. **Findings**: Children say: "It's a fun way to exercise." Parents say: "The action cards provide a better understanding of what is specifically trained in each exercise and why the exercises are important." Therapists find that children are more motivated and take ownership of the rehabilitation process. **Conclusion:** The response from children and families has been predominantly positive. Patients find the exercising fun and are proud to show off their decorated suitcase. Parents find a better understanding of each exercise and why they are important. Take-home messages It is important for children and adolescents to feel a sense of ownership in order to engage in exercise, as this encourages them to participate more actively in self-training.

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13. Nonpharmacological interventions to reduce sedation and general anesthesia in pediatric patients undergoing magnetic resonance imaging: a systematic review and meta-analysis

Jakob Thestrup[1], Jane Hybschmann[1], Thurid W. Madsen[2], Nanna E. Bork[3], Jette L. Sørensen[4, 5], Arash Afshari[6], Lise Borgwardt[7], Marianne Berntsen[2], Alfred Peter Born[8], Lise Aunsholt[5, 9,10], Vibeke A. Larsen[11], Line K. Gjærde[1]

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Background/Aim: Nonpharmacological strategies are increasingly used in paediatric procedures, but in in paediatric magnetic resonance imaging (MRI), sedation or general anesthesia are still commonly required. We aimed to evaluate the effectiveness of nonpharmacological interventions in reducing the need for sedation and general anesthesia in paediatric patients undergoing MRI. **Materials/Methods:** In this systematic review and meta-analysis, we searched four databases for randomized controlled trials and quasi-experimental designs from inception through October 10, 2022, with no language restrictions. We included studies that compared the effect of a nonpharmacological intervention with standard care on use of sedation or general anesthesia, scan time, image quality, or child and parental anxiety among infants (<2 years), children, and adolescents (2–18 years) undergoing MRI. **Findings:** Forty-six studies were eligible for the systematic review. Limited to studies on children and adolescents, the meta-analysis included 20 studies with 33873 patients. Intervention vs. comparator analysis showed that nonpharmacological interventions were associated with reduced need for sedation or general anesthesia in the RCTs (RR, 0.68; 95% CI, 0.48–0.95; I2=35%) and non-randomized studies (RR, 0.58; 95% CI, 0.51-0.66; I2=91%) [1]. The effect was largest among children aged 3-10 years when compared to older children and adolescents aged 11-18 years. **Conclusion:** Nonpharmacological interventions,

such as feeding and immobilization in infants, and strategies to prepare, distract, and acknowledge children and adolescents, can reduce the use of sedation and general anesthesia in paediatric patients undergoing MRI. **Take-home messages:** Nonpharmacological interventions should be considered as standard care in infants, children and adolescents undergoing MRI.

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14. 'Guess Who?® - Hospital Edition: An ethnography of how children differentiate between the identities and purposes of the staff who care for them.

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Background/Aim: Despite growing interest in hospital play by multidisciplinary experts, there is a relative lack of scientific evidence and observational studies to capture children's perspectives [1,2]. This doctoral research aimed to deepen understanding of children's hospital experiences and their interactions with Health Play Specialists (HPS), to derive insights into healthcare professionals' training and education [3]. **Materials/Methods:** Hospital Ethnography. Participant observation (274 hours) and 14 play-based interviews (3-17yo). **Findings:** Hospitalised paediatric patients tend to be scared or anxious when adults approach them and/or their bed space; they are in a constant state of trying to guess who they are and for what purpose they came; Non-verbal patients use body language to guess; Verbal patients ask short, direct questions to figure out the identity and purpose of the 'visitor': With time, children and young people build interpersonal relationships; this helps them work out who they consider "terrifying", who they can "trust or not", and who they could consider "friends". **Conclusion:** Simple gestures could potentially spare paediatric patients from at least one brief 'scare' and make them more receptive to our presence. Stating our purpose or revealing our intentions should be integrated into healthcare education. **Take-home messages:** Next time you approach a hospitalised paediatrics patient: (1) Show both your hands; and (2) quickly reveal your intentions: 'I am here to ask some questions' or 'I am here to play'.

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15. The Role of Child Life Specialists in Shaping Children's Healthcare Participation Rights: Findings from a Multi-Site Study in The Netherlands

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Background/Aim: Realizing children's right to meaningful participation in healthcare decision-making remains a challenge in practice. While child life specialists (CLSs) are often positioned as duty bearers of children's rights, no previous research has explored the role of CLSs in shaping children's participation in healthcare decision-making. **Methods:** This critical ethnographic study explored the experiences of CLSs in shaping children's participation rights across two pediatric hospitals in the Netherlands [2]. Semi-structured interviews were conducted with CLSs (n = 12) and directors/managers (n = 5). Relevant policy and legal documents (n = 17) were also analyzed. **Findings:** While child life specialists and directors perceived children's participation rights as valuable and important, these rights were primarily constructed as an adult-dominated practice that was complicated by various interrelated contextual factors. **Take-home messages:** The

knowledge generated by this study points to the value of challenging decontextualized and simplistic framings of children's 'voice' and 'choice' in favour of a relational framing of children's healthcare participation rights [1,3]. This framing can account for the important role of adults and broader socio-cultural and legal contexts in shaping children's participation rights across different domains of pediatric healthcare practice (e.g., critical, palliative care). This study also serves as a starting point for discussion regarding the job responsibilities of CLSs/play therapists across countries such as Canada, the United States, and the Netherlands and how collaboration between these professionals across countries can be optimized to realize children's participation rights in practice and policy developments.

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16. A Group Intervention for Adolescents Across Chronic and Severe Illness

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Background/Aim: Adolescents with chronic or long-term illness struggle to construct identity due to stigma and isolation from everyday activities and social communities, therefore, we developed a group intervention in 2016 at Rigshospitalet. With the intervention, we aimed to create a community for adolescents with a chronic or long-term illness that supports friendships based on shared experiences, strengthens empowerment and identity development, and involves participants in becoming peer leaders. **Materials/Methods:** The intervention's pillars were Learning, Involvement, Friendship and Empowerment (LIFE). We focused on conversations and exercises regarding hope, universality, sharing, altruism, social skills, mirroring, importance of community, existential questions, and new narratives. Annually, 8-10 adolescents (aged 15-20) across diagnoses and genders attended the intervention from September to May. LIFE includes eight group meetings, two weekend camps, and one evening for family and friends. A social educator, a nurse and three peer leaders facilitated LIFE. **Findings:** The distribution of illnesses constituted cancer, organ transplants, hemophilia, arthritis, autoimmune, bowl, and congenital heart diseases, and rare diseases. 68 of 72 participants completed LIFE with a distribution of 32 males and 40 females. 16 of 72 have received training to operate as peer leaders. We found that learning from sharing experiences and being involved and supported through friendships was possible despite diagnosis, age, and gender and it also strengthen empowerment and identity and volunteering as future peer leaders. **Conclusion:** LIFE illustrates, with its high percentage of participants who completed the group, the ability to create community that empowers adolescents across diagnosis. **Take-home messages:** LIFE let us to remember that Learning, Involvement, Friendships and Empowerment creates strong pillars for our personal foundations and well-being when facing struggles.

17. Co-conducting research with adolescents and young adults: early experiences from the MyHospitalVoice project

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Background/Aim Researchers are encouraged to conduct research with or for patients instead of on or about them to increase relevance and minimise research waste. However, many researchers lack knowledge and skills to facilitate meaningful patient involvement [1]. We aim to share our methods and early experiences from involving young adults as

peer-researchers in MyHospitalVoice (development of a patient-reported experience measures for children and adolescents [2]. **Materials/Methods:** We used the "Participation Matrix"[3] to map our expected degree of involvement and invited Rigshospitalet's Youth Panel as peer-researchers. Together, we planned and facilitated a workshop for pediatric patients about hospital experiences, then discussed the process and findings. **Findings:** Three young adults engaged as peer-researchers in the first phase. We collaboratively established a "commitment frame" sensitive to their changing workloads: after three months, they continue, pause, or change places with someone else. Peer-researchers selected activities and facilitated large parts of the workshop. When discussing findings, we had high agreement, with peer-researchers tending to add an extra "qualitative layer" to explore and elaborate on quantified scores. **Conclusion:** We find that young adults can contribute substantially to research and find meaning in their work. Researchers may encounter discrepancies between "traditional" research methods and facilitating involvement, such as balancing scientific rigor with flexibility for peer-researcher input. The "Participation Matrix" was useful in discussing where and how to involve patients. **Take-home messages:** Co-conducting research with young adults is feasible. Researchers must allow for unexpected inputs for genuine involvement. Extra time and resources may be necessary to successfully involve peer-researchers.

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18. MyHospitalVoice – a digital tool co-created with children and adolescents that captures patient-reported experience measures: a study protocol

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Background/Aim: Patient-reported experience measures (PREMs) are questionnaires about how patients experience their healthcare encounter. PREMs are perceived as a valuable tool to incorporate patient voices into healthcare systems. However, a new PREM tool is needed to represent the voice of children and adolescents in Danish hospitals. Our primary aim is to collaborate with children, adolescents, and young adults to develop and validate the digital PREM tool MyHospitalVoice. Our secondary aim is to document and evaluate approaches used during the involvement and to assess its impact**. Materials/Methods:** We will include adolescents and young adults as peer-researchers in the development and validation of MyHospitalVoice to represent the child and adolescent perspective in decision-making processes. We will document involvement activities and evaluate them based on frameworks for patient and public involvement including the "Participation Matrix" [1] and the Patient Engagement in Research Scale (PEIRS-22) [2]. **Conclusion:** Our study will result in a validated, digital PREM tool, MyHospitalVoice, developed with and for children and adolescents that enables and supports them to share their patient experiences. We will provide both practical and evidence-based approaches for involving children, adolescents, and young adults in health research and generate insights into co-conducting research and contribute to discussions about implications and impact in this emerging field. **Take-home messages:** We need a new PREM tool to give voice to children and adolescents in hospitals. MyHospitalVoice will be developed with and for children and adolescents. Frameworks for patient and public involvement will guide and document the involvement processes.

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19. Giving adolescents with cancer the agenda - an evaluation of the Youthcheckprogram

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Background/Aim: Adolescents with cancer want health professionals to show greater interest in them as individuals beyond their disease and desire tailored support to meet individual needs. Thus, we developed the Youthcheckprogram for adolescents with cancer ages 12-18. This study aimed to evaluate adolescents, parents, and healthcare professionals' experiences of the program. **Materials/Methods:** The Youthcheckprogram contains four steps: 1) The youth coordinator introduces the program and 10 conversation cards on topics like sexuality, appearances, and school. 2) The coordinator helps the adolescent to articulate and document feelings and thoughts related to the cards forming a story 3) The adolescent's story is shared in a multidisciplinary team conference to determine appropriate support. 4) The coordinator presents the support suggestions to the adolescent, who can accept or decline it. Parents participate in step one and four. We evaluated the program using semi-structured interviews and a questionnaire. **Findings:** We interviewed 10 adolescents and 13 parents, and 77 health professionals answered the questionnaire. The Youthcheckprogram offered a safe space that encouraged openness among adolescents, addressed parents' needs for support, and provided new insights that were not always taken into account. It contributed to a more youth-friendly environment in the department, ensuring tailored support and involving adolescents in decision-making. **Conclusion:** The Youthcheckprogram was positively evaluated by adolescents, parents, and health professionals**. Take-home messages:** 1. The Youthcheckprogram actively engages adolescents in their care and treatment. 2. Implementing the Youthcheckprogram impacts the entire department. 3. The youth coordinator is crucial in facilitating the Youthcheck.

20. Lëtz Make it Happen: Redefining Pediatric Healthcare Experiences in the Grand Duchy of Luxembourg

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We in Luxembourg have an opportunity to fulfill our obligations to evidenced-based childfriendly healthcare standards and further integrate rights-based pediatric best-practices into our hospitals by learning from existing models in neighboring European countries and globally, such as the child life specialist profession, and to participate with other expert networking groups and conferences where the Grand Duchy is not yet represented. Unfortunately, Luxembourg lags behind many of its global counterparts, despite being signatory to the UN Rights of the Child, Council of Europe Guidelines on Child Friendly Healthcare, JCI Guidelines, etc. Understanding that creating alignment and synergy between interventions, organizations and individuals is crucial to effective child and family-centered healthcare, we forged passion with expertise to form the Luxembourg Association for Children in Hospital (LACH) non-profit organization in order to embed children's rights into the healthcare system through collaboration between the community, academia, and government. LACH aims to serve as a support for clinics treating children in order to enhance their ability to implement optimal child-friendly care by providing resources including but not limited to: clinician child-friendly healthcare and non-pharmacological pain management training, funding child life specialists, increasing access to play and child-friendly environments, and fostering research and collaboration on children's rights in healthcare. Our contribution to the PREPARE symposium discusses the current state of child-friendly healthcare in Luxembourg from clinical, parental, academic, and multidisciplinary perspectives. Furthermore, we share our ambitious short and long term goals for redefining

pediatric healthcare experiences in our country both in terms of challenges and opportunities.

21. Interprofessional staff perspectives on the role and value of play in hospital

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Background/Aim: Play-focused spaces and staff are increasingly seen as essential in paediatric healthcare environments [1]. While children consistently express that play is a crucial part of their healthcare experience [2], their experiences are shaped by the relationships they encounter within these environments. It is important to consider not only children's desires but also the perspectives of the healthcare professionals who work with them. This study examined interdisciplinary staff views on the role of play in paediatric care, focusing on a UK paediatric oncology ward. The aim was to understand how healthcare professionals perceive and integrate play into their practice, and its impact on patient care. **Materials/ Methods:** Fifteen semi-structured interviews were conducted with staff representing various professions, focusing on their experiences with and attitudes toward play in hospital settings and its use in their interactions with paediatric patients. **Findings:** Staff perspectives on play varied widely. Some described play as a critical element of their work, facilitating trust, building relationships, and ultimately saving time in the long term when conducting their work with children and families. However, others noted that play can be an additional burden on time and resources, especially in acute or high-pressure situations. Several staff members acknowledged that engaging in play or playful approaches does not come naturally to all those who work in paediatrics, and that learning how to use play in clinical care often occurs informally through observation and experience. Staff also recognised that play not only supports children's wellbeing but also their own, contributing to an overall more positive environment. **Conclusion:** There is inconsistency in how play is valued and integrated into paediatric care. Some view play as a supplementary, resource-intensive activity while others consider it a core element of child healthcare. It cannot be assumed that all paediatric staff feel confident or skilled in using play, despite the common expectation that it comes naturally to those working with children. To provide truly person-centred, holistic care, play must be recognised as a fundamental aspect of paediatric health, reinforced by formal staff education and a more structured approach to incorporating play into clinical practice. **Conflict of interest:** There were no conflicts of interest in this study. The authors are conference collaborators.

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22. Centring children's lived experiences in understanding the importance of play in hospitals

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Background/Aim: Children have a right to participate in matters affecting their lives [1]. With increasing regularity, children's perspectives are being sought regarding their health and health care experiences. Though there is evidence that children find play to be one of the 'best' aspects of hospitalisation [2], studies rarely focus on children's perspectives on play in hospital. This qualitative study investigated children's lived experiences of play during hospitalisation [3]. **Materials/Methods:** Over five months, ethnographic observations were conducted on a paediatric oncology ward to explore children's play experiences embedded in the hospital context. Additionally, 16 semi-structured interviews were conducted with children ages 3–13 years to gather their perspectives about hospital play. **Findings:** Using interpretative phenomenological analysis, children's expressions and experiences illuminated three key points: first, play in hospital is essential but depends on children being made to feel safe and welcome, as hospitals are not naturally playful spaces. Second, children navigate playing in hospital in complex and personal ways, demonstrating agency in how they define and experience play. Finally, even in hospital,

children see play as a normal, expected aspect of their lives, which helps to reinforce their identity as children first and foremost. **Conclusion:** Hospitals can only be child-friendly if children find them friendly. Listening to and integrating children's perspectives in the discourse around the importance of play in hospital is essential for respecting children's rights and delivering person-centred paediatric healthcare.

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23. Role-playing and Collage creation: Exploring playful methods for understanding patient needs and generate patient experience solutions

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Patient experience solutions engender complex experiences that go far beyond aesthetics. We believe that by better understanding patients' and families' emotional and functional interactions with existing solutions, we might better understand those to design future patient experiences. This abstract presents techniques to gain insights into existing solutions. We report on 3 pilot studies using role-play and collage creation to assess building spaces, explore the design requirements for the TC machine and room, and define the setting of a new teenager's mental health day care hospital. Those pilots aimed to understand the effectiveness of those methods. In the pilots using the role-play method, the children who took part in the techniques understood perfectly what their task was and, naturally played a role, thus giving information to the observer about their dynamics of emotions, perceptions, and inner thoughts. Children start learning through imitation. For this reason, role-play becomes valuable for its purpose. On the other hand, the collage technique pilot was used with adolescents; creativity was paramount to carry it out. By giving them different options (Colours, textures, furniture…), participants were able to imagine how their ideal space for treatment would look like and fill it with elements through their vision. As the exercise unfolded, they also expressed the reasons for their decisions. Applying methods that involve play, creativity, and imagination enables the engagement of children and promotes participation, which for us, is as important as the final product.

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24. Family navigators help parents support children with cancer in maintaining normalcy during treatment - a development and implementation perspective

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Background/Aim: Cancer treatment for children is

intensive and complex. Parents often feel lost and unable to adequately support their child during treatment. This study describes the development and implementation of a family navigator function aimed to help families navigate the complex treatment trajectory.
Materials/Methods: In 2020 a multidisciplinary working group was formed. The group developed the family navigator function based on a previous developed model1,2 and interviews with researchers and specialists in pediatric and adult oncology. Implementation included regular feedback meetings with management, the working group, and navigators, leading to ongoing adjustments in tasks and workflows. **Findings:** Actions for family navigators were identified as: 1) Supporting families with special needs, 2) Managing transitions within and between hospital, municipality, and educational institutions, 3) Establishing support services, and 4) Addressing issues regarding disease relapse. The navigators work diagnosis-specific giving individualized support. The navigators' work is consolidated by involving interprofessional collaborators within and across sectors. Since 2020, the navigators have supported more than 300 families and families have provided positive feedback to department management and on social media. **Conclusion**: This study strengthened our belief that the family navigator function enhances the families in helping their child maintain their normal life during treatment. Further evaluation of the function is needed. **Take home messages:** 1. Clearly defining and communicating the navigators' key areas is essential. 2. The diagnosis-specific navigator function is crucial for meeting individual needs. 3. Interprofessional collaboration is a key to success of the navigators' work.

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25. Narrative and play-based diabetes consultations: Evaluation of a participatory and child-centered communication tool

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Background/Aim: This study aimed to evaluate the effectiveness of a narrative and play-based communication tool to enhance the delivery of child-centered care and support young children's participation in diabetes consultations. **Materials/Methods:** Conducted at two pediatric diabetes clinics in Denmark, the study compared standard consultations (control) with those incorporating a play-based communication tool (intervention). A total of 40 consultations were video-recorded: 20 before and 20 after implementing the play-based tool. Ten families were interviewed, and questions were posed to children via their parents. Participants included young children aged 3–8 years with type 1 diabetes and their families. Data were analyzed by three researchers using thematic analysis. **Findings:** The play-based approach significantly shifted the consultation dynamic from a predominantly "adult space", where children had limited opportunities to participate, to an environment where children actively engaged with healthcare professionals (HCPs). Communication became more balanced, with children participating directly rather than having their parents answer on their behalf. In control consultations, children often exhibited disengaged body language, such as leaning away and looking down. In contrast, during play-based consultations, children showed open and engaging body language, including leaning forward, making eye contact, and showing interest. **Conclusion:** The narrative and play-based communication

tool effectively enhanced child-centered care by promoting active participation from young children in diabetes consultations. This approach improved communication dynamics, fostering greater agency, engagement, and openness from the children. **Take-home Messages:** Play is essential for providing child-centered care and enhancing young children's participation in clinical settings.

26. Establishing consensus on principles and competencies for the use of play in clinical practice in hospitals: an international Delphi study

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Background/Aim: Play is a way that children cope with the challenges of hospitalization[1]. Although play is increasingly integrated in paediatric hospitals, it is often used sporadically and without formal training for healthcare professionals [2]. The aim of this study was to establish consensus on principles and competencies for the use of play in paediatric clinical practice. **Materials/Methods:** We conducted a three-round Delphi study that included healthcare professionals selected by management from ten different countries. The first round, including open-ended questions about the use of play, was translated into eight languages. Based on the first-round responses, we used content analysis to generate principles, learning objectives, barriers, and facilitators for using play in clinical practice, and participants rated the importance of each principle and learning objective in the second and third rounds. **Findings:** Among 66 appointed interprofessional participants, 45 responded in round 1 and 41 in rounds 2 and 3. After three rounds, consensus was reached on accepting 33 principles and 20 learnings objectives. Play was used as a way to build trustful relationships, deliver information and increasing understanding, promote cooperation and participation, reduce procedure-related anxiety and pain, and supporting coping and development [3]. **Conclusion:** We found that play can be used to communicate and involve paediatric patients in their treatment and care. The insights from this study can inform future initiatives and training programmes for paediatric healthcare professionals in using play to provide patient-centred treatment and care. **Take-home messages:** Play is way for healthcare professionals to provide patient-centred treatment and care.

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27. Paediatric patient perceptions of healthcare professionals: contributions to a communication curriculum

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Background/Aim: Communication skills are a vital but often neglected part of paediatric training [1]. To make communication training more responsive to patient needs, children and adolescents should be involved in developing the communication curriculum for healthcare professionals, though this is rarely the

case. The present study explored children and adolescents' perceptions of healthcare professionals to inform and contribute to formulating goals, learning objectives, and competencies for an interprofessional paediatric communication curriculum. **Materials/ Methods:** We used narrative and of play-based interviews [2] to include the perceptions of preschool children aged 3–6 years (n=8) and an online questionnaire to explore those of schoolchildren and adolescents aged 5–18 years (n=54). To analyse the qualitative interview data and open-ended questionnaire responses, we did a thematic analysis. **Findings**: Our analysis showed that preschool children found familiar approaches, physical contact, and their parents comforting and that healthcare professionals should use playful methods, child-friendly words, and tangible rewards. Schoolchildren and adolescents preferred healthcare professionals who were friendly, patient, attentive, communicated clearly, and engaged them in conversation. They disliked when healthcare professionals appeared stressed, did not keep their promises, or forced them to do something [3]. **Conclusion:** We established recommendations on what healthcare professionals should do more or less of in paediatric encounters based on the insights of children and adolescents. This knowledge can be used to guide learning objectives in communication training for paediatric healthcare professionals. **Take-home messages**: Involving children and adolescents in healthcare education can aid in providing patient-centred care.

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28. Children's rights and procedure related participation

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Background/Aim: Children and adolescents hospitalized in Denmark, sometimes experiences procedure related restraining. The aim of this research is to investigate if children's rights are taken into consideration in procedure related interactions, between healthcare professionals and 2-8-years old, and to achieve a nuanced understanding of experienced facilitators and barriers, in relation to children's involvement and participation related to procedures. **Methods:** Qualitative interviews conducted with 10 healthcare professionals, in two interdisciplinary focus groups. Analysis is performed using a hermeneutic approach and is discussed with Lundy's model of participation. **Findings:** Healthcare professionals have many considerations about children's rights, even though they are not conscious about it, and it is never communicated directly as "children's rights". Children's participation is in focus, but healthcare professionals find it difficult, to balance between what the child wants and what the child needs. A good relationship with the child is dependent on feelings of trust and safety. The collaboration with parents is important and is mostly experienced as a facilitator but can also be experienced as challenging**. Conclusion:** Children's rights are not a conscious part of healthcare professional's mindset, but they are very aware, that the child should participate in decision-making**. Take-home message:** Children's rights (United Nation Convention on the rights of the children) are not at the forefront of healthcare professionals' minds, when they work with 2-8-years old. Some have none or very limited knowledge about children's rights, where others have an awareness of the subject, but do not think of it as children's rights.

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29. Translating the ISupport standards into Danish

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Background/Aim: ISupport is an International collaboration, who have developed a set of rights-based standards to Support paediatric patients during clinical procedures by reducing harm and establishing trust[1]. The standards are currently available in five languages [2] , and we aimed to translate them into Danish. **Materials/Methods:** We used the World Health Organization translation methodology. After obtaining permission to translate the standards, our multidisciplinary team iteratively translated them into Danish. Next, a professional bilingual translator undertook backward translation, which we reviewed and amended. One author of the original version reviewed the backward translation, and we finalised the Danish ISupport standards. **Findings:** Overall, we found elements of the standards difficult to translate due to specific words and the length and complexity of sentences. In our first version, we chose Danish terms already used in our clinics; "supportive holding" was initially translated to "voluntary restraint" as no Danish word corresponds to it. Only after several versions and input from an author of the original version, we fully understood that we must challenge our current use of words and intentionally NOT use existing terms. Instead, we used the new phrasing of "supportive holding" to underscore this change in mindset. Lastly, we consistently changed "child" to "children and adolescents" for the standards to be applicable to the Danish setting. **Conclusion:** We reached a final Danish version of the ISupport standards for professionals through an iterative and informative process. **Take-home messages:** The ISupport standards mark a shift in how we discuss, perceive, and provide physical and emotional support to children and adolescents undergoing healthcare procedures.

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