

Ask EuroSafe Imaging Tips & Tricks

Paediatric Imaging Working Group

What patients should know

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Introduction

Child health is a broad and complex process which involves the promotion of preventive measures, therapies and the interaction with the child, family, health services and other social sectors. (Ayres, 2004).



Promoting humanization in health care implies a good relationship between the child and the health care providers, stimulating the active participation of the child.

Reception in paediatric imaging

In child care, there are crucial factors that are important to consider, such as accessibility, humanized services, attentive professionals and the good conditions of the spaces where the patients wait for the treatment.



- Smile increases heart rate, improves oxygenation, massages vital organs and decreases pain

Smile as Therapy



- Play and interact with the musical notes, sing and promote interaction between the musician, the child and the family. Transform a difficult life situation in a better experience.

Music as Therapy

Reception in paediatric imaging

Promote Development

- Humanization in care
- A good relationship between the child and health care professionals

Promote Improvement

- Active participation by the child
- Of hospital infrastructures, new technologies and technical and scientific qualification

Promote Qualification

- Of professionals for a better performance

Reception in paediatric imaging



Whatever examination to be performed, the reception takes place before, during and after the diagnostic procedure.



Give the child the opportunity to know the exam room.

Inform and prepare for the procedures to be performed.

Proceed according to the guidelines.




Create an environment that fosters communication and reassurance with a child.

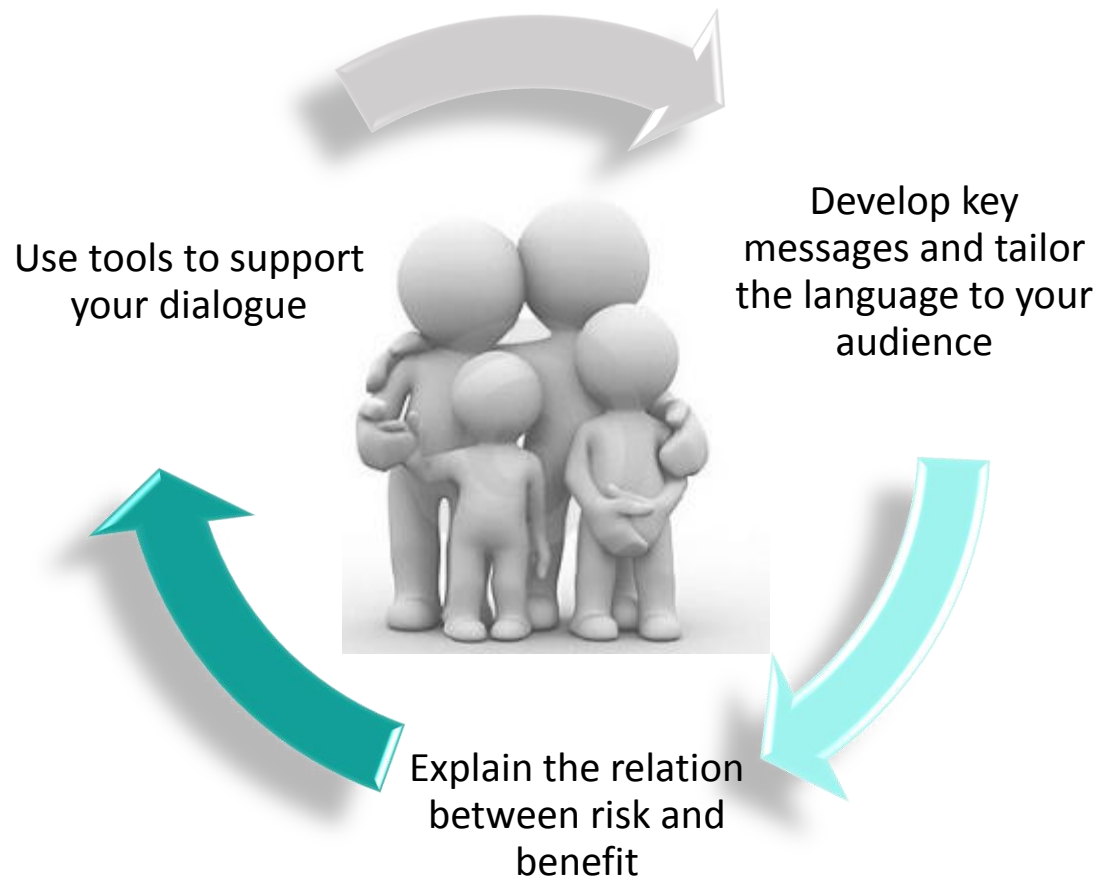
Collect information about possible allergies, weight, fasting period, and inform of possible situations that start with administration of contrast.

Inform parents or family when possible and stay with the children.

The quality of communication in the paediatric context has a relevant influence on parents' adaptation to treatment, essential for an efficient therapeutic process.

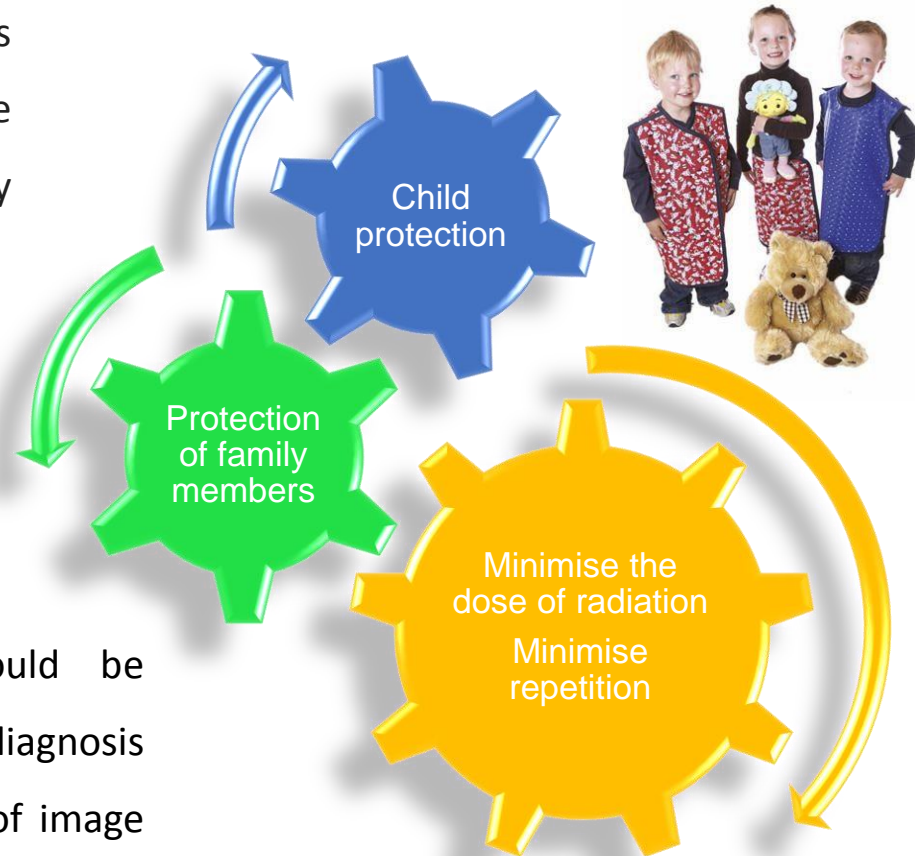
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- Communicating risks and benefits of a radiological procedure is an essential component.
 - It should be ensured that patients, parents and caregivers receive the information they need in the way they can understand it.
 - Each patient and family may be different.

Patient centered communication



Radiation Protection

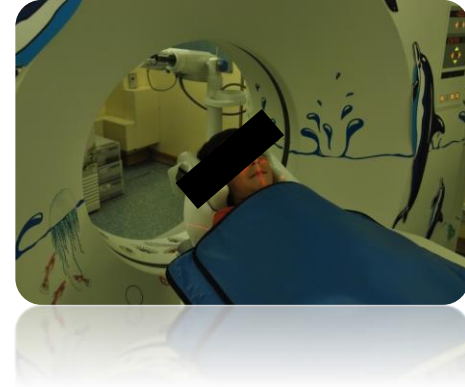
When possible, use imaging methods without ionizing radiation or, low dose protocols - ALARA (as low as reasonably achievable)



Medical exposures in paediatrics should be matched according to age and pathology (diagnosis and therapy), with acceptable standards of image quality.

Radiation Protection

- The proper selection of equipment and accessories.
- Reference levels for radiodiagnosis for children.



Immobilise to protect

Several techniques of immobilisation exist and are employed in radiology routine. Keeping the paediatric patient still will improve image quality and reduce radiation exposure.

The immobilisation need must be explained to the parents or legal tutors in order to prepare the child and provide support during the imaging procedure.



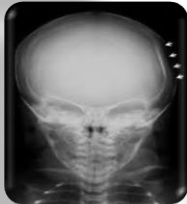
Our Experiences



- Dorsal decubitus up to 2 months
- Sitting until the age of 3
- In AP up to 6 years
- In PA with more than 6 years



- Immobilization at elbow level



Perineal sinuses

- Waters
- Hirtz from 4 years old when working, or from 6 years old
- Skull
- Cavum



Pelvis

- <6 months sonography
- > 6 months radiography in 2pp



- Wrist - Osse Age



Conclusions

- The information provided should be centred on the clinical utility and the impact of the procedure on the outcome.
- The expected outcome of the discussion is that patients/parents trust the caregivers.
- Use immobilisation when needed.
- Optimise your immobilisation techniques to optimise radiation exposure to paediatric patients.
- Reduce the need of retake.
- Do not exceed the dose necessary for an image of adequate diagnostic quality.

References

Ayres JRCM. O cuidado, os modos de ser (do) humano e as práticas de saúde. Saúde e Sociedade. 2004;13(3):16-29.

Communicating risks in paediatric imaging – WHO 2016 ISBN 978 92 4 151034 9.

Broder JS, Frush DP (2014) Content and style of radiation risk communication for pediatric patients. J Am Coll Radiol 11:238-242

European commission, European guidelines on quality criteria for diagnostic radiographic images in paediatrics, report 16261