

# Ask EuroSafe Imaging Tips & Tricks

## Paediatric Working Group

# Immobilisation in Paediatric Imaging: Why and How – Revisited!

**Claudio Granata** (IRCCS Istituto Giannina Gaslini, IT)

**Jennifer Grehan** (University College Dublin, IE)

**Alexander Schegerer** (Federal Office for Radiation Protection, DE)

## Why is immobilisation so important?

- Keeping a patient still is one of the fundamental elements of diagnostic imaging.
- The quality of any image produced for diagnostic purposes is down to the skill of the professional undertaking the exam.
- One of the key elements of this skill is minimising movement unsharpness to avoid needing to repeat undiagnostic images.
- There is an art to keeping patients still when they don't want to be or when the position itself makes discomfort worse.
- Training is required to undertake this properly!

## How do we immobilise?

- In diagnostic imaging, immobilisation is achieved by “direct” or “indirect” means.
- This means that we are constantly either:
  - encouraging children to keep themselves still (indirect)Or
  - applying an external influence (e.g. a holder/aid) to keep patients still when they would rather be moving (direct)

## What should we consider?

- Younger patients are rarely compliant enough to keep themselves still, so professional responsibility around best practice is even more important.
- This group of patients is particularly important as they mostly lack the capacity to consent to what is being done – even if it is in their medical best interests.
- Parents/carers will usually be the ones giving third party consent on behalf of their child – this includes immobilisation – so involving them is key!

## Who should we consider? – Parents & Carers



- Regardless of what we require, it is important to recognise how parents can react to what we need to “put their child through” during an examination.
- Where possible, they should be provided with adequate information about the imaging in advance.
- This should give details of what they can expect before, during and after the examination – and that immobilisation of their child may be required.
- Understanding the importance of immobilisation in the radiation protection of their child and their role and responsibilities within that will help both parents and staff.

# Important to understand defining terms:

## To immobilise:

- “Consent has been given, thus normally requires less force than restraining” (RCN)
- In other terms: “Holding Still”
- Implies a degree of consent and compliance from patient



Copyright 2018 Jennifer Grehan.

## To restrain:

- “The application of positive force to over power a child without their consent” (RCN)
- In other terms: “Holding Down”
- Implies lack of consent on the part of the patient



[www.clearimagedevices.com](http://www.clearimagedevices.com)

## Immobilisation - guidance

- The European Guidelines on Quality Criteria for Diagnostic Radiographic Images in Paediatrics (1996):

“Patient positioning must be exact, regardless of a non-cooperative child.”

- Health Professions Council (2003): Standards of Proficiency: Radiographers:

“Ensure that patients are positioned (and if necessary immobilised) for safe and effective interventions.”

- United Nations Convention on the Rights of the Child – UNCRC (1989):

Every child has a right to be safe, protected from harm and have the best possible healthcare.

## What simple aids can help us?

- Sponge Pads



- Sandbags



- Velcro

- Blankets



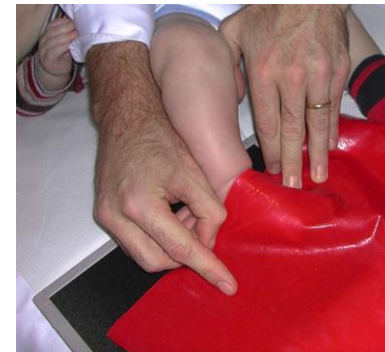
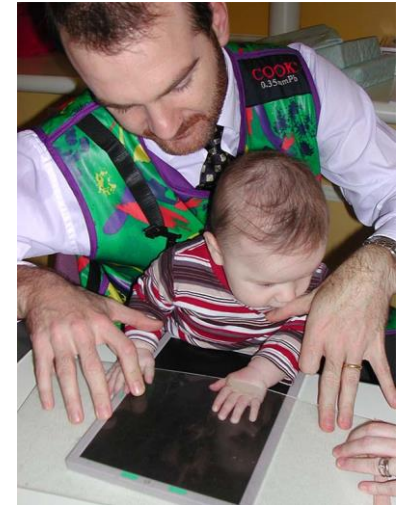
All photos copyright 2018 Jennifer Grehan.

- Most importantly - Parents/carers!



# What simple aids can help us?

- Distraction
- Perspex/Film/Acrylic
- Dedicated Seating
- Most importantly - Parents/carers!



Copyright 2018 Jennifer Grehan.

## Immobilisation – How to...

- Best practice immobilisation will always be parent based – involve them!
- Good immobilisation is based on trust: so communicate well and explain what you are doing (in advance)!
- Know what resources you have available but use them sparingly!
- Always have a local immobilisation policy and appropriate training plan in place!

And finally...

Remember, making the most of what resources you have is all about confidence, competence and communication!



Copyright 2018 Jennifer Grehan.

## References

1. European Commission (1996) European Guidelines on Quality Criteria for Diagnostic Radiographic Images in Paediatrics.
2. International Atomic Energy Agency (2012) No 71. Radiation Protection in Paediatric Radiology. IAEA Safety Reports Series: Vienna
3. ICRP (2013) Clement CH, Sasaki M [Eds] Radiological protection in paediatric diagnostic and interventional radiology. ICRP Publication 121. Annals of the ICRP 42(2).
4. Office of the United Nations High Commissioner (1989) Convention on the Rights of the Child.
5. Royal College of Nursing (1999) Restraining, Holding Still and Containing Children: Guidance for Good Practice. London, RCN
6. Society and College of Radiographers (2012) Imaging Children; immobilisation, distraction techniques and use of sedation