Varus derotation osteotomy (VDRO)

What are the procedures?
For children who are at risk of a hip dislocation a varus derotation osteotomy (VDRO) is considered. A VDRO is performed by cutting through the upper end of the thigh bone (femur). The VDRO is designed to tip the ball of the femur into the hip socket. We may also correct turning in of the femur at the same time.
The VDRO is usually stabilized with plates and screws to hold the bone in its new position until it is fully healed. The plates and screws may need to be removed approximately 2 years after surgery.

Why is it necessary?
Children with spastic or weak muscles and children who are unable to walk, frequently develop hip dislocation over time (see Figure 1). When the hip becomes unstable the treatment of choice is a VDRO. This may be combined with a procedure to reshape the socket of the hip, for example a Dega osteotomy (see Figure 2).

What happens if the hip dislocates?
A child may feel some or all of these symptoms:
- Pain or discomfort
- Difficulties with sitting and standing
- Decreased hip range of movement
- Difficulties with dressing and changing
- Skin breakdown and/or infections in skin folds
- Difference in leg length
What happens during a hospital stay?

Pain management
Your child will be asleep and will be under anaesthesia for their operation. When they wake, your child will be given pain medicine and maybe muscle relaxants. Any surgery creates some pain, but your child will be given medication to manage this. Pain management in hospital is done either by a nerve block, a drip or oral medicine.

After surgery
Your child may be allowed to weight bear straight away within pain limits, or have a period of non-weight bearing. This depends on the strength of the bone and other surgeries that were done at the same time. This will also depend on the preference of the surgeon.

Your child may need to be positioned with their legs apart after surgery. If this is needed your child will be fitted with an appropriate positioning device depending on the preference of the surgeon.

If your child uses a wheelchair they may need seating adjustments due to a change in the width of the pelvis and change in their leg position after surgery. This will be done by the occupational therapist while your child is in hospital.

After the operation children usually stay in hospital for 5-7 days.

Caring for your child at home
Your child may need some special equipment to use in the hospital and to go home with. They may need a wheelchair and a commode to help with toileting and showering. Your occupational therapist will talk to you about further recommendations and assistance.

You will need to give your child regular pain medicine when you are at home. It is important to give this to them before showering, transferring and toileting. We will make sure you have pain medicine for your child when you take them home.

Your physiotherapist and occupational therapist will also help your child to start walking or using a wheelchair depending on your doctor’s instructions. Your physiotherapist will also give you some exercises to do with your child.

Remember:
- Make sure that your local therapists know about the upcoming surgery.
- If your child is not currently seeing an OT or Physio, please contact your local service now to go on the waiting list. Please make sure you let the service know when your child is having surgery.
- Please advise your child’s school that your child will be having surgery and they could be off school for several weeks.
- Please think about advising your own work that you may need time off around the surgery date. Also let family and friends know who may be able to help out at the time of surgery.

Important considerations
- Your child will probably have some pain after surgery so make sure you give them regular pain medication
- Your child will need more help after their surgery for moving around, showering and transfers
- Make sure you let us know if your child becomes sick before the operations as their surgery may need to be postponed
- Check their skin regularly for red areas (pressure areas) as these are painful and can have serious consequences if left untreated