

Implementing a Multi-disciplinary Service for New-born Hip screening

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Background:

The neonatal new-born screening service for development dysplasia (DDH) of the hip was previously provided by the neonatology team. They were unable to continue to provide this service and the ultrasound department agreed to provide this service in conjunction with the orthopaedic and paediatric physiotherapy department. The time-frame to ready the new clinic was short and it was felt that the Plan, Do, Study, Act (PDSA) cycle¹ would be the most effective methodology to implement this service change efficiently.

Plan:

Requirements of the new service.

1. It had to be set up within a short time-frame of 3 months.
2. It had to be safe in terms of timely, accurate diagnosis with appropriate referral to the orthopaedic and physiotherapy teams where appropriate.
3. Neonates with evidence of DDH should have immediate access to the multi-disciplinary team (orthopaedic and paediatric Physiotherapy) if further treatment or follow-up was required. A one stop shop approach was therefore desirable.



The Multi-disciplinary team:

Front Row (left to right):

Lisa Hurndall (Sonographer), Faye Nightingale (Team Lead Paediatric Physiotherapist), James Metcalfe (Consultant Orthopaedic Surgeon)

Back Row: (left to right)

QiQi Lam (Lead Sonographer), Angela Dowle (Sonographer), Dr Judith Foster (Consultant Paediatric Radiologist), Peter Cantin (Consultant Sonographer)



Do:

What was needed in order to set up the service?

1. **A multi-disciplinary approach** was the single most important factor in setting up the service. A working group involving the multi-disciplinary clinical team together with those with management and financial expertise was set up.
2. **Financial expertise** was required to ensure that the service was financially sustainable. This took place in parallel with the planning of the clinical aspects of the service.
3. **Suitable training** - Sonographers spent time in the existing clinic led by a Consultant Neonatologist. Attendance at a formal GRAF course was also booked.
4. **Equipment**- The neonatal unit agreed to provide an ultrasound machine to be used within the clinic.
5. **An Integrated approach**- Collaboration with orthopaedics and paediatric physiotherapy to find a suitable session in which all 3 teams (Imaging, Orthopaedics and Paediatric physiotherapy) were available.
6. **Space**- The orthopaedic and paediatric physiotherapy teams already ran their clinics in the Children's and Young Person's Outpatient Department (CYPOD). A suitable space was located within CYPOD for ultrasound scanning also, allowing immediate access to follow-up, a suitable space within CYPOD was located for ultrasound scanning also.

Study and Act:

1. All aspects of the "Do" were met in a timely fashion to ensure the clinic was ready to run within the 3 month time period.
2. To ensure safety and image quality sonographers underwent a period of audit. 50 cases were reviewed by a consultant Paediatric Radiologist and assessed for their image quality, image interpretation and report. If the sonographer achieved the required standard then they were signed off as competent.
3. Ensuring immediate access to follow up and treatment. To date 100% of clinics have been run in conjunction with orthopaedics and paediatric physiotherapy. Those patients who require on going care have had immediate access to these teams after their ultrasound scan.

Restarting the PDSA cycle:

All aims were achieved for the initial PDSA cycle, however, it became clear that further work was needed to 'fine-tune' the service and a second cycle of PDSA is currently being undertaken. The plans include;

1. Better formal recording of patient outcomes for yearly review.
2. Assessing parental satisfaction with the service- This will be assessed as part of CYPOD Friends and Family questionnaire.
3. Refining referral criteria and mechanisms for referral into the clinic.
4. Developing a central and single mechanism for requesting of hip ultrasound via e-requesting.

Conclusion

We describe our experiences of setting up a new ultrasound hip screening clinic from scratch in a short space of time. Use of suitable project methodology (PDSA cycle) together with a whole-team collaborative approach was essential in ensuring that the service was functional within the desired time scale. Further work is currently on-going to 'fine-tune' the service.

References

¹ NHS Improvement (2018) Plan, Do, Study, Act (PDSA) cycles and the model for improvement.