A chylothorax develops when chyle, normally transported in lymph vessels throughout the body, builds up around the lungs and exerts pressure on them, making it difficult to breath. Initial treatment usually requires drainage of the chyle by inserting a chest tube placed into the pleural space around the lungs.

Although the development of a chylothorax is relatively uncommon, it does result in significant risks and complications for particular groups of infants and children. Hospital stay can be extended by weeks; there is the risk of a surgical procedure, an increased risk of infection and the potential for a substantial impact on both the child and their family’s quality of life.

Almost all previous research into chylothorax has been retrospective, and single centre. Very little is known about the situation in the UK or Ireland, either the number of children affected, the severity of the condition, how the children are treated or their long-term outcome. Until we better understand the scale and nature of the problem, we will continue to be hampered in determining targets for prevention, how best to treat these infants and children and ultimately improve outcome.

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Background
The development of a chylothorax impacts significantly on the recovery process of an infant or child and on the health services needed to care for them. Many of these children require extended care in neonatal or paediatric intensive care units or high dependency ward areas and whilst mortality rates in the specialities which encounter chylothorax continue to fall, the focus for health professionals has shifted to optimising management to minimise significant mortality such as chylothorax.

Coverage
United Kingdom & Republic of Ireland

Duration
1st June 2010 – 30th June 2011
**Research Questions**

**Incidence:**
- What is the incidence of developing a chylothorax in infants and children ≥ 24 weeks gestation – 16 years in the UK?
- What is the distribution by age, sex and underlying condition of infants and children who develop a chylothorax?

**Clinical Presentation:**
- What factors predispose infants and children to developing a chylothorax?
- What are the presenting clinical features in infants and children who develop a chylothorax?

**Clinical Management:**
- What are the clinical management or therapeutic approaches used to treat this condition?

**Outcome:**
- What is the length of treatment required to resolve a chylothorax?
- How long do symptoms of chylothorax last?
- What is the outcome for infants and children who develop a chylothorax?

**Case Definition**

Any infant or child under the age of 16 years, including neonates ≥24 weeks gestation presenting for the first time with one of the following should be reported on the BPSU orange card system:

**Inclusion criteria**
- A suspected clinical diagnosis of chylothorax, without pleural drainage.
- Where pleural drainage is cloudy / opaque fluid is obtained consistent with chylothorax, but no laboratory confirmation of the diagnosis has been sought.
- An accumulation of lymphatic fluid in the pleural space with:
  - Triglyceride content >1.1 mmol/litre
  - Total cell count >1000 cells / microlitre

**Reporting instructions**

Please report any cases that you have seen in the last month which meet the surveillance definition including confirmed and suspected cases. Please report to the BPSU even if you believe the case may have been reported from elsewhere.

**Methods**

Paediatricians reporting a case through the orange card system will be sent a questionnaire which explores demographic and clinical information about the infant or child. A postage paid return envelope will be enclosed with the questionnaire.

**Ethics approval**

This study has been approved by the Institute of Child Health / Great Ormond Street Hospital REC (Ref:10/H0713/27) and has been granted ECC for Section 251 Support (ECC/BPSU 3-02(FTI))

**Funding**


**References**