children who are admitted on high flow oxygen can be weaned to low flow oxygen in under 3 months. Although no specific risk factors were identified, it was recognised that the average length of time spent ventilated in NICU was greater than for babies who were not admitted to the respiratory ward. These figures are helpful information for parents of these babies. They have formed the basis of MDT work between neonatologists and respiratory physicians to improve inpatient management.

**SURVEY OF PHYSICIAN PRACTICE AND OPINIONS REGARDING THE USE OF PALIVIZUMAB AS RSV PROPHYLAXIS, INCLUDING IN CHILDREN WITH SMA TYPE 1**

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10.1136/archdischild-2022-rpch.396

**Aims**

**Background** Infants with Spinal muscular atrophy type 1 (SMA-1) may have reduced cough mechanism, impaired airway clearance and consequent risk of severe respiratory illness. Major advances in the last decade include a new, potentially curative gene therapy. Expert consensus guidelines recommend RSV palivizumab prophylaxis for symptomatic infants with SMA-1.1 However, the UK Green Book Recommendations (GBR) for palivizumab do not include children with neuromuscular disease (NMD), including SMA-1.

**Objectives** We aimed to survey UK physicians on the use of palivizumab outside of the GBR, to examine current practical use in infants with NMD, including SMA-1.

**Methods** A 15-question survey was compiled. Respondents were asked about their experience of using palivizumab outside of GBR and, if so, what the indication was.

Four questions explored the use of palivizumab in patients with SMA-1: whether palivizumab had been given to a child with the condition; if so, how this was organised; and if not, the reasons why.

Four statements concerning the use of palivizumab in NMD and responders’ opinions regarding further research in this field were rated on a five-point scale of ‘definitely agree’ to ‘definitely disagree’.

The survey was circulated to paediatric, paediatric respiratory and neurology teams in the UK.

**Results** Seventeen health care practitioners completed the survey from fifteen centres across ten different UK regions. Sixteen participants indicated they used palivizumab at their centre. Five participants (29%) had arranged for palivizumab to be given to children with risk outside the standard GBR, with NMD including SMA-1 the most common indication (29%).

Nine respondents (53%) had given palivizumab to a child with SMA-1. While 41.2% had organised this as part of a standard indication, one NHS trust funded palivizumab for this group. Two respondents used palivizumab for infants with SMA-1 receiving cough assist or ventilatory support. However, four practitioners did not see role of palivizumab for this population.

Most (65%) respondents disagreed with the statement ‘palivizumab should not be given to children with NMD’. However, there was strong agreement (82%) with the view ‘there needs to be more evidence regarding use of palivizumab for children with NMD’. While 35% agreed, 47% respondents disagreed with the statement ‘it would be unethical to do large multicentre RCTs on the use of palivizumab as RSV prophylaxis in children with NMD’.

**Conclusion** This survey highlights a variation in practice across the UK regarding palivizumab for children with NMD. Many clinical teams in the UK offer palivizumab on an individual basis beyond the GBR to children they deem to be at risk, such as those with SMA-1.

Further research would provide clinicians with the evidence base required to inform the potential use of palivizumab in SMA-1, however, clinicians have differing opinion about ethics of conducting such studies.

The GBR should be reconsidered to provide clear direction for palivizumab use in children with NMDs, including SMA-1, to provide equity of access.

**REFERENCE**


**EXAMINATION OF DIAPHRAGMATIC THICKNESS AND EXCURSION OF PRE-TERM AND TERM INFANTS THROUGH UTILIZATION OF ULTRASOUND IMAGING**

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**Aims** The aim of the study is to measure diaphragmatic thickness, excursion, and diaphragmatic thickness fraction (DTF) among healthy preterm and term infants in order to generate control values for further studies for diagnosing diaphragmatic dysfunction, determining extubation readiness, and monitoring the impact of therapeutic interventions.

**Methods** This was an observational cross-sectional study conducted at the Neonatal Intensive Care Unit (NICU) of Jim Pattison Children’s Hospital between June 2020- May 2021.

The study population included 25 healthy term (37+ weeks) and preterm (32–36/6 weeks) infants.

The inspiratory thickness was measured by placing one caliper on the top margin of the crest of the curve, and the other on the lower margin. The expiratory thickness was measured by placing one caliper on the upper margin of the trough of the curve and the other on the lower margin. The wave height corresponded to the diaphragmatic excursion, thus one caliper was placed on the top margin of the crest and the other on the lower margin of the trough to obtain this measurement. These measures were calculated for both right and left hemidiaphragm. The diaphragm thickness fraction was calculated using the formula: DTF = (inspiratory thickness – expiratory thickness)/expiratory thickness x 100 for each infant.

**Results** We examined a total of 25 infants with 76% male and 24% female infants ranging from gestational age of 32 weeks to 40 weeks.

The right inspiratory and expiratory thickness of the infants yielded a mean of 0.366 mm ± 0.058 and 0.213 mm ± 0.037, respectively with a mean right hemidiaphragm excursion of 0.664 mm ± 0.149. The left inspiratory and expiratory thicknesses had means of 0.389 mm ± 0.063 and 0.226 mm ± 0.051. Four questions explored the use of palivizumab in patients with SMA-1: whether palivizumab had been given to a child with the condition; if so, how this was organised; and if not, the reasons why.

Four statements concerning the use of palivizumab in NMD and responders’ opinions regarding further research in this field were rated on a five-point scale of ‘definitely agree’ to ‘definitely disagree’.

The survey was circulated to paediatric, paediatric respiratory and neurology teams in the UK.

**Results** Seventeen health care practitioners completed the survey from fifteen centres across ten different UK regions. Sixteen participants indicated they used palivizumab at their centre. Five participants (29%) had arranged for palivizumab to be given to children with risk outside the standard GBR, with NMD including SMA-1 the most common indication (29%).

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**Conclusion** This survey highlights a variation in practice across the UK regarding palivizumab for children with NMD. Many clinical teams in the UK offer palivizumab on an individual basis beyond the GBR to children they deem to be at risk, such as those with SMA-1.

Further research would provide clinicians with the evidence base required to inform the potential use of palivizumab in SMA-1, however, clinicians have differing opinion about ethics of conducting such studies.

The GBR should be reconsidered to provide clear direction for palivizumab use in children with NMDs, including SMA-1, to provide equity of access.
mm ± 0.048, respectively, and a mean left hemidiaphragm excursion of 0.649 mm ± 0.143.

**Conclusion** Unless there is clinical suspicion of unilateral diaphragmatic dysfunction, focusing on right hemidiaphragm measurements may be adequate when assessing extubation readiness.

**Abstract 1284 Table 1** Data for completed self-report questionnaires at assessment and discharge

<table>
<thead>
<tr>
<th>N</th>
<th>Nijmegen</th>
<th>HADS Anxiety</th>
<th>Pediatric Quality of Life Inventory (PEDS-QL)</th>
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<tbody>
<tr>
<td>N</td>
<td>Assessment (time point 1)</td>
<td>Discharge (time point 2)</td>
<td>p</td>
</tr>
<tr>
<td>---</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-------</td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>15</td>
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</tbody>
</table>

*Data recorded as n, median (inter-quartile range); p value.

**Conclusion** Dysfunctional breathing problems originate and are maintained by multiple factors and, consequently, children and young people benefit from a multidisciplinary approach to their breathing difficulties. Multidisciplinary intervention was associated with significant reduction in physiological and psychological symptoms and improvements in young people’s self-reported quality of life.

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