Aims The Northern Ireland Paediatric Education, Audit and Research Network aims to create easily accessible, high quality regional guidelines based on best practice to enhance the care we give our patients in Northern Ireland (NI). Informal feedback had suggested the lack of guidelines for the management of Coombs Positive neonates caused confusion and frustration among trainees, and may contribute to longer inpatient stays and additional invasive tests being carried out.

We set out to review the first-line investigations performed in Coombs Positive infants in Northern Ireland (NI) and examine variation in practice. Additionally we created a region-wide online survey of perceptions and practice among the multidisciplinary team.

Our ultimate aim is to create a regional guideline to allow standardised and safe practice.

Methods We conducted a retrospective, multi-centre cohort study in the five NI Trusts. A pro-forma was created and data was collected on infants who were Coombs positive on cord or venous bloods.

A regional survey obtained feedback from trainees, consultants and nurse practitioners involved in the management of Coombs Positive infants. This examined current practice, confidence in management and desire for a regional guideline.

Results We identified 34 babies who were Coombs Positive between October - December 2021. Of these, 11 required phototherapy and 15 had follow up. First review ranged from one to nine weeks, with variations in the investigations carried out at these appointments. Two infants who required phototherapy were discharged on folic acid, with a planned duration of 6 weeks and 4 months respectively. Furthermore, it emerged that in one centre Coombs were frequently not being done when indicated, leading to possible delayed or missed diagnoses of haemolytic disease in the newborn.

The feedback survey of practice demonstrated a wide variation in practice and uncertainty of the correct management. 50% of respondents said they would seek senior guidance, 16% said they would follow NICE guidelines, despite these guidelines not existing. 80% of respondents would monitor babies who didn’t require treatment for 24 hours, and 10% would monitor for 48 hours.

37% of respondents would organise follow up for all Coombs Positive infants, regardless of risk factors and treatment.

All respondents felt that a regional guideline would be beneficial.

Conclusion There is demonstrable variance in practice, with over-treatment and possible missed diagnoses a concern. Investigation into the cause of the omitted Coombs tests identified the use of blood forms in one location without an option for a Coombs test. As a result these have now been replaced, and a local audit of practice is planned to ensure that the issue is resolved.

A guideline for standardised practice has been written and is being reviewed by an expert panel prior to a planned regional roll-out. Implementation of this guideline will benefit patients by reducing additional investigations, and allowing earlier discharge if low risk. It will benefit medical staff by ensuring a consistent regional approach. Overall this will help to reduce the time and medico-economic burden on the health service.

Abstract 997 Table 1 Factors associated with toxic vancomycin levels in neonates in Epoch 1 and Epoch 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Epoch 1 (n=44)</th>
<th>p value</th>
<th>Epoch 2 (n=54)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA (e=0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth weight (g)</td>
<td>251 (243)</td>
<td>&lt;0.001</td>
<td>254 (257)</td>
<td>0.31</td>
</tr>
<tr>
<td>PDA (%)</td>
<td>94 (69)</td>
<td>&lt;0.001</td>
<td>77 (66)</td>
<td>0.08</td>
</tr>
<tr>
<td>Vancomycin exposure (days)</td>
<td>18.6 (2.2)</td>
<td>0.000</td>
<td>15.2 (2.1)</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Conclusion There is a high incidence of toxic vancomycin levels in preterm babies on NICU. Risk is predicted by duration of vancomycin exposure and potentially birthweight, GA and PDA presence. Our dosing changes did not reduce the number of babies with vancomycin toxicity but may have reduced the impact on renal function.

Abstract 1011 CREATION OF A REGIONAL GUIDELINE FOR MANAGEMENT OF COOMBS POSITIVE INFANTS

1Kathryn Wilson, 1Steven Montgomery, 3Anna Hayburn, 2Pamela Slevin, 1Lauren Hetherington, 2Susan Knox, 1Mary-Beth Toner, 4Andrea Stobo, 1Kathryn Wilson, 1Steven Montgomery, 2Anna Hayburn, 2Pamela Slevin, 1Rie Yoshida, 2Chinthika Piyasena, 3Sorana Galu, 4Devangi Thakkar, 5Cheryl Battersby.

1Royal Belfast Hospital for Sick Children; 2Guys and St Thomas NHS Foundation Trust, London; 3Homerton University Hospital NHS Foundation Trust; 4The Hillingdon Hospitals NHS Foundation Trust; 5Imperial College Healthcare NHS Trust

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