Embrace Annual Report

2017 - 2018
# Contents

1. Foreword .................................................................................................................. 3  
2. Highlights 2017/18 .................................................................................................. 4  
3. Embrace service ....................................................................................................... 5  
   - Mission statement ......................................................................................... 5  
   - Background to Embrace .............................................................................. 6  
   - Who we serve? .............................................................................................. 6  
   - What is the role of Embrace? ...................................................................... 7  
   - Activity 2017/18 ......................................................................................... 9  
4. Embrace aeromedical service ................................................................................. 11  
5. Feedback .................................................................................................................. 15  
   - Embracing parents ...................................................................................... 15  
   - Parent feedback responses ....................................................................... 15  
   - What the parents say about Embrace ...................................................... 16  
   - You said, we did ......................................................................................... 17  
   - Sharing of feedback .................................................................................. 18  
   - Referring and receiving unit feedback ....................................................... 19  
   - Referring unit feedback to Embrace ......................................................... 19  
   - Receiving unit feedback to Embrace ......................................................... 20  
6. Clinical governance and quality improvement ...................................................... 21  
   - Utilisation review ........................................................................................ 21  
   - Safety review meetings ............................................................................. 21  
   - Quality improvement meetings ................................................................ 21  
   - Quality improvement data ........................................................................ 22  
   - Regional meetings ...................................................................................... 22  
   - Audit ............................................................................................................ 23  
    - Completed & presented audit and service evaluation projects 2017/18 .... 23  
    - Mortality meetings .................................................................................... 25  
    - Guidelines ................................................................................................. 25  
    - Research .................................................................................................... 26  
    - Lectures, presentations and academic .................................................... 27  
    - International and national committees and working groups .............. 30  
7. Education and training .......................................................................................... 32  
   - In-house Embrace education .................................................................... 32  
   - Outreach education ..................................................................................... 33  
   - Link nurse days .......................................................................................... 34  
8. Charity ...................................................................................................................... 35  
9. Embrace in the news .............................................................................................. 36  
10. Work in progress for 2018/19 ................................................................................ 37  
11. Appendices ............................................................................................................ 38  
   - Appendix 1 ................................................................................................. 38  
   - Appendix 2 ................................................................................................. 39  
   - Appendix 3 ................................................................................................. 40  
   - Appendix 4 ................................................................................................. 41
1. Foreword

2017/18 has been a landmark year for Embrace. We successfully re-accredited with CAMTS in October 2017 for critical care transport by ground, rotary wing and fixed wing. In addition we were newly accredited by CAMTS EU and became the first dual accredited service in the world. The fixed wing accreditation recognized our strengthened relationship with IAS Medical and our new relationship with Air Alliance and we welcome them as CAMTS partners together with Yorkshire Ambulance Service and The Children’s Air Ambulance. These partnerships are a key element of our ability to provide the highest level of care to the babies, children and families of Yorkshire & the Humber.

We hope you enjoy this annual report.

Cath Harrison, Lead Consultant (Neonates)
Steve Hancock, Lead Consultant (Paediatrics)
Suzanne Palmer, Lead Nurse
2. Highlights 2017/18

- Embrace received 3343 referrals and sent teams for 1987 transfers of infants and children across Yorkshire, the Humber and beyond

- Embrace completed 28 helicopter and 11 fixed wing missions

- Fully accredited by the Commission on Accreditation of Medical Transport Systems (camts.org and camtseu.org) for critical care transport by ground, rotary wing and fixed wing

- Accredited partnerships with Yorkshire Ambulance Service NHS Trust, IAS Medical, Air Alliance and The Children’s Air Ambulance

- Key performance reporting to PICANet, Neonatal Transport Group and the Ground and Air Medical qUality Transport (GAMUT) database
3. Embrace service

Embrace Yorkshire & Humber Infant & Children’s Transport Service has been operational since 6th December 2009. The service meets the standards set by the UK Paediatric Intensive Care Society\(^1\), the National Institute for Health and Clinical Excellence Specialist Neonatal Care Quality Standard\(^2\) and the Commission on Accreditation of Medical Transport Systems\(^3\) for the provision of specialist transport services by ground and air.

The host organisation for Embrace is Sheffield Children’s NHS Foundation Trust - one of only four independent children’s Trusts in the UK.

Mission statement

Embrace aims to provide the highest quality paediatric and neonatal care for infants, children and their families from the first point of contact to arrival at the destination unit.

It is the mission of Embrace to provide:

- A single point of telephone contact for referring clinicians
- Access to immediate specialist clinical advice
- Triage to an appropriate level of transport provision and dispatch of transport teams within a clinically appropriate time window
- Identification of a suitable cot or bed so that the most appropriate care is provided in the most appropriate location for any infant or child requiring specialist care in the Yorkshire & Humber region
- Logistical support for high risk obstetric transfers by locating a suitable maternal bed and neonatal cot

---

\(^1\) PICS Quality Standards for the Care of Critically Ill Children 5th Edition. Paediatric Intensive Care Society; 2016
\(^2\) Specialist Neonatal Care Quality Standard. National Institute for Health and Clinical Excellence; 2010
\(^3\) Commission on Accreditation of Medical Transport Systems standards 10th Ed camts.org and camtseu.org
To achieve this Embrace will:

- Maintain appropriate communication between all parties to ensure the efficient and effective continuity of patient care
- Ensure every transfer is carried out in a way that maximises patient safety, comfort and dignity and minimises patient pain, discomfort, or distress and that of parents/guardians

**Background to Embrace**
Embrace provides specialised transport for all newborn infants and critically ill children from Yorkshire and the Humber who need moving between hospitals. The aim is to provide this service at the right time while providing the same high standards of care that they would receive in a specialist hospital. The vision was for a service separate from the receiving and referring hospital, enabling the team to be available on demand for the transfer of a critically ill infant or child. The service was founded on co-operation and collaboration between all parts of the Yorkshire & Humber NHS and this spirit has been fundamental to the continued success and growth of the service.

Embrace is part of the Surgery & Critical Care Division at Sheffield Children’s NHS Foundation Trust which includes Paediatric Intensive Care, High Dependency Care, Neonatal Surgery, Paediatric Anaesthesia, Theatres and the Pain Service. Working within a Division that specialises on the delivery of critical care to patients has allowed Embrace to develop strong clinical governance structures focussing on safety and quality.

**Who we serve?**
Embrace serves the children of Yorkshire and the Humber region which covers an area of 15,400 square kilometres, has a population of 5.3 million, of which 17% are aged under 16 years, and an annual live birth rate of approximately 75,000. The community includes large urban settlements such as Hull, Leeds and Sheffield as well as rural areas such as the East Riding of Yorkshire and North Yorkshire. We transfer newborn infants and critically ill children to and from the hospitals operated by the acute NHS Trusts in the region:
What is the role of Embrace?
Most infants and children can be cared for close to home in their local hospitals, however there are some for whom this is not possible. Embrace provides a single point of contact by which clinicians caring for these infants and children can access regional services, get advice and arrange transfers.

A single phone number puts the clinician through to a call handler who takes some basic information before bringing in one of our specialist transport consultants. As more details are obtained a picture of the infant or child is put together. Other specialists, such as neonatologist, cardiologists or intensive care physicians, can be ‘conferenced’ into the call by the call handler as required. Together these clinicians can make a plan for the care of the infant or child. All calls are recorded and these recordings form part of the clinical records.
When a plan involves moving the infant or child to more specialist care, the transport consultant and nurse co-ordinator decide upon the makeup of the transport team to provide the best possible care during the journey. This will depend on the level of critical care that the infant or child requires. The sickest children would have a team consisting of a transport consultant, middle grade doctor or Advanced Nurse Practitioner working with a transport nurse and ambulance driver; a more routine transfer may involve a transport nurse and a driver.

On arrival at the referring hospital the Embrace team take a handover from the referring team before assessing the child. The child can be moved onto the transport equipment once the team are satisfied that the patient is stable. The journey can then begin. Wherever possible, Embrace encourages a parent to accompany their child during the journey. On arrival at the destination hospital the child is handed over to the receiving team and moved from the transport trolley into an appropriate bed or cot for their ongoing care. Once the transfer has been completed the Embrace team will liaise with the base to determine the next task to be completed.

Air transport is provided in collaboration with specialist partners, by either fixed wing or rotary wing.

Regular feedback from the referring and receiving hospital teams as well as parents has enabled Embrace to be responsive to the needs of those it serves and to modify our service.
Activity 2017/18
During the report period Embrace took 3343 referrals which resulted in 1987 neonatal/paediatric transfers. 518 referrals related to in-utero transfer requests.

The following graphs and tables show this activity in greater detail.

<table>
<thead>
<tr>
<th>Consolidated activity</th>
<th>Apr-17</th>
<th>May-17</th>
<th>Jun-17</th>
<th>Jul-17</th>
<th>Aug-17</th>
<th>Sep-17</th>
<th>Oct-17</th>
<th>Nov-17</th>
<th>Dec-17</th>
<th>Jan-18</th>
<th>Feb-18</th>
<th>Mar-18</th>
<th>Year to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referrals</td>
<td>238</td>
<td>284</td>
<td>302</td>
<td>265</td>
<td>255</td>
<td>221</td>
<td>299</td>
<td>299</td>
<td>337</td>
<td>289</td>
<td>264</td>
<td>290</td>
<td>3343</td>
</tr>
<tr>
<td>Paediatric Transfers</td>
<td>34</td>
<td>41</td>
<td>37</td>
<td>30</td>
<td>29</td>
<td>27</td>
<td>32</td>
<td>55</td>
<td>50</td>
<td>51</td>
<td>50</td>
<td>47</td>
<td>483</td>
</tr>
<tr>
<td>Neonatal Transfers</td>
<td>100</td>
<td>133</td>
<td>143</td>
<td>136</td>
<td>131</td>
<td>102</td>
<td>144</td>
<td>123</td>
<td>127</td>
<td>137</td>
<td>98</td>
<td>130</td>
<td>1504</td>
</tr>
<tr>
<td>Total Transfers</td>
<td>134</td>
<td>174</td>
<td>180</td>
<td>166</td>
<td>160</td>
<td>129</td>
<td>176</td>
<td>176</td>
<td>177</td>
<td>188</td>
<td>148</td>
<td>177</td>
<td>1987</td>
</tr>
<tr>
<td>Advice Calls</td>
<td>49</td>
<td>56</td>
<td>45</td>
<td>46</td>
<td>39</td>
<td>44</td>
<td>58</td>
<td>68</td>
<td>82</td>
<td>47</td>
<td>51</td>
<td>46</td>
<td>631</td>
</tr>
<tr>
<td>In-utero referrals facilitated</td>
<td>42</td>
<td>37</td>
<td>42</td>
<td>41</td>
<td>41</td>
<td>35</td>
<td>52</td>
<td>45</td>
<td>56</td>
<td>40</td>
<td>47</td>
<td>40</td>
<td>518</td>
</tr>
<tr>
<td>Non Embrace transfers</td>
<td>13</td>
<td>17</td>
<td>17</td>
<td>12</td>
<td>15</td>
<td>13</td>
<td>13</td>
<td>8</td>
<td>22</td>
<td>14</td>
<td>18</td>
<td>24</td>
<td>186</td>
</tr>
</tbody>
</table>
The following table shows the break down between neonatal and paediatric work compared between 2016/17 and 2017/18, with further break down between in utero and advice calls. Part of Embrace’s role is to provide an in-utero bed finding service and facilitate obstetrician to obstetrician discussions. The following graph shows activity handled by the call centre team. Embrace work closely with the Neonatal Operational Delivery Network and the regional Maternity Strategic Clinical Network to ensure effective use of all the available cots in the region.

<table>
<thead>
<tr>
<th>Embrace activity comparison</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total referrals 2016/17</td>
<td>3436</td>
</tr>
<tr>
<td>Total referrals 2017/18</td>
<td>3343</td>
</tr>
<tr>
<td>Embrace paediatric transfers 2016/17</td>
<td>516</td>
</tr>
<tr>
<td>Embrace paediatric transfers 2017/18</td>
<td>483</td>
</tr>
<tr>
<td>Embrace neonatal transfers 2016/17</td>
<td>1588</td>
</tr>
<tr>
<td>Embrace neonatal transfers 2017/18</td>
<td>1504</td>
</tr>
<tr>
<td>Embrace total transfers 2016/17</td>
<td>2105</td>
</tr>
<tr>
<td>Embrace total transfers 2017/18</td>
<td>1987</td>
</tr>
<tr>
<td>No transfer/advice 2016/17</td>
<td>600</td>
</tr>
<tr>
<td>No transfer/advice 2017/18</td>
<td>631</td>
</tr>
<tr>
<td>In utero referrals facilitated 2016/17</td>
<td>547</td>
</tr>
<tr>
<td>In utero referrals facilitated 2017/18</td>
<td>518</td>
</tr>
<tr>
<td>Non-Embrace transfers 2016/17</td>
<td>185</td>
</tr>
<tr>
<td>Non-Embrace transfers 2017/18</td>
<td>186</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity difference 2016/17 and 2017/18</th>
<th>Number difference</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total referrals</td>
<td>-93</td>
<td>-3%</td>
</tr>
<tr>
<td>Embrace paediatric transfers</td>
<td>-33</td>
<td>-6%</td>
</tr>
<tr>
<td>Embrace neonatal transfers</td>
<td>-84</td>
<td>-5%</td>
</tr>
<tr>
<td>Embrace total transfers</td>
<td>-118</td>
<td>-6%</td>
</tr>
<tr>
<td>No transfer/advice</td>
<td>+31</td>
<td>+5%</td>
</tr>
<tr>
<td>In utero referrals facilitated</td>
<td>-27</td>
<td>-5%</td>
</tr>
<tr>
<td>Non-Embrace transfers</td>
<td>+1</td>
<td>+1%</td>
</tr>
</tbody>
</table>
4. Embrace aeromedical service

The philosophy behind Embrace’s aeromedical service is to ensure that our patients have access to the best form of transport depending on clinical condition, distance, weather and logistics. This will often be a road ambulance, but may be a fixed wing aircraft or helicopter.

Working with our partners we are able to provide a comprehensive NHS service and have developed the capability to transfer ventilated patients by fixed wing aircraft (IAS Medical⁴ and Air Alliance⁵) and by helicopter (The Children’s Air Ambulance⁶). The important relationship with our local HEMS service (Yorkshire Air Ambulance⁷) continued, allowing us to get specialist teams and equipment out to the patient’s bedside at our more distant hospitals. We also have a partnership with a government search and rescue contractor (Bristow⁸). When working with TCAA, IAS and Air Alliance we are fully accredited by the Commission on Accreditation of Medical Transport Systems.
Aeromedical Report 2017

14051 patient-kilometres travelled

5 partners ... 

TCGA (The Children’s Air Ambulance)
Charitable provider, Augusta Westland AW169 helicopter

YAA (Yorkshire Air Ambulance)
Charitable provider, Airbus H145 helicopter

Air Alliance
Commercial air ambulance company, Lear J35 fixed-wing aircraft

IAS Medical
Commercial air ambulance company, King Air 200 fixed-wing aircraft

Bristow
Government search and rescue contractor, Sikorsky S-62 helicopter

Patient Moves

Team Moves

Clinical Categories
(excluding repatriations)

32 Flights*

Includes one commercial flight escort

Respiratory 3
Neuro 1
ENT 1
Cardiac 4
Prematurity 1

8 on 23 occasions a helicopter was requested but declined

Aircraft Unavailable
Weather Turndown

TCGA
YAA
Bristow

An analysis of the YAA team moves for 2016 showed a 39% improvement in Decision, Response time for flying and an average time saving of 50 minutes when compared to matched road journeys.
There were 11 incidents related to flights in 2017:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>Missing items from kit bag; Babypoold dip mixing; Monitor damage; Monitor battery failure</td>
</tr>
<tr>
<td>Landing Site</td>
<td>Helped use refuse; Delayed patients; Poor quality helipad surface (frontonlough x3)</td>
</tr>
<tr>
<td>Communications</td>
<td>Wrong staff info provided to air provider; Air provider unclear about oxygen cylinder compatibility &amp; content</td>
</tr>
</tbody>
</table>

Ongoing research projects:

- Evaluation of a helicopter orientation programme for a regional infant and children's transport service with the local helicopter emergency medical service air ambulance
- Stories from children's nurses in flight: Exploring experiences of aeromedical transfers

Quality Improvement:

Embrace has submitted three complete years of data to GAMUT. The Ground & Air Medical Transport Quality Improvement Collaborative uses the GAMUT database as a free resource for transport teams to track, report, analyse and improve their performance on transport-specific quality metrics.

Accreditation:

Embrace is fully accredited for ground, rotary-wing and fixed-wing transport with CAMTS, the Commission on Accreditation of Medical Transport Systems. A non-profit agency dedicated to evaluating medical transport services against industry-established safety criteria. Embrace is the only service in the UK and one of only six services outside the USA to be accredited. Additionally, Embrace is the first service to be awarded CAMTS EU accreditation.

---

[Camts logo]

[Camts website]

[Embrace logo]
In 2017/18 Embrace transferred 11 patients by fixed wing aircraft and 21 patients by helicopter. In addition we used a helicopter to fly an Embrace team and equipment to 7 critically ill patients. Please see Appendix 1 for a detailed utilisation review.

5 of the 11 fixed wing flights were international repatriations.

We are pleased to be able to continue to offer a fixed wing service in partnership with IAS Medical, who are based at Teeside Airport. We worked with IAS Medical to achieve our fixed wing CAMTS accreditation in 2017. Embrace are now able to safely transfer patients in fixed wing aircraft who require inhaled humidified gases, thanks to a generous gift of specialist equipment from the hospital charity.

In 2017 Embrace entered into partnership with Air Alliance, a German air ambulance company with a base in Birmingham. We are able to provide them with a comprehensive neonatal and paediatric team and equipment solution for international transfers. 2017 saw Embrace collaborate on the provision of incubator and Babypod based transport stretcher systems which will fit in their aircraft, and a group of Embrace staff have undergone training with this air provider. We worked with Air Alliance to achieve our fixed wing CAMTS accreditation in 2017.

We flew 21 patients with The Children's Air Ambulance in 2017/18. We look forward to TCAA's exciting plans to develop their service in 2018 by adding an additional aircraft, increasing operating hours and upgrading their fleet to larger, more modern helicopters. Training on the new systems has already commenced. We worked with TCAA and the operator of their new helicopters, “Specialist Aviation Services”, to achieve our fixed wing CAMTS accreditation in 2017.

4 iasmedical.com
5 air-alliance.de
6 thechildrensairambulance.org.ok
7 yorkshireairambulance.org.uk
8 bristow.com/
5. Feedback

Since Embrace was first established we have invited feedback from stakeholders including patients, parents and referring/receiving hospital staff. There are feedback forms on our website which can be completed and emailed directly to the service.

Embracing parents

Embrace aims to offer one parent the opportunity to travel with their baby/child. Parent’s views of the service are collected throughout the year using an anonymous feedback form. Parents are also able to email their feedback regarding their experience.

The table below show the results from our parental feedback work.

<table>
<thead>
<tr>
<th></th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referrals</td>
<td>238</td>
<td>284</td>
<td>302</td>
<td>265</td>
<td>255</td>
<td>221</td>
<td>299</td>
<td>299</td>
<td>337</td>
<td>289</td>
<td>264</td>
<td>290</td>
</tr>
<tr>
<td>Paediatric Transfers</td>
<td>34</td>
<td>41</td>
<td>37</td>
<td>30</td>
<td>29</td>
<td>27</td>
<td>32</td>
<td>55</td>
<td>50</td>
<td>51</td>
<td>50</td>
<td>47</td>
</tr>
<tr>
<td>Neonatal Transfers</td>
<td>100</td>
<td>133</td>
<td>143</td>
<td>136</td>
<td>131</td>
<td>102</td>
<td>144</td>
<td>123</td>
<td>127</td>
<td>137</td>
<td>98</td>
<td>130</td>
</tr>
<tr>
<td>Total transfers</td>
<td>134</td>
<td>174</td>
<td>180</td>
<td>166</td>
<td>160</td>
<td>129</td>
<td>176</td>
<td>178</td>
<td>177</td>
<td>188</td>
<td>148</td>
<td>177</td>
</tr>
<tr>
<td>Forms distributed</td>
<td>89</td>
<td>116</td>
<td>108</td>
<td>105</td>
<td>87</td>
<td>78</td>
<td>103</td>
<td>118</td>
<td>90</td>
<td>100</td>
<td>83</td>
<td>105</td>
</tr>
<tr>
<td>Forms returned</td>
<td>15</td>
<td>13</td>
<td>15</td>
<td>10</td>
<td>9</td>
<td>4</td>
<td>8</td>
<td>9</td>
<td>11</td>
<td>15</td>
<td>7</td>
<td>17</td>
</tr>
</tbody>
</table>

Parent feedback responses

![Parent feedback responses](image.png)
What the parents say about Embrace

“Thank you so much for all you did – we truly can’t express how much we appreciate your help.”

“You do such an amazing job. You really helped make an extremely heartbreaking time a little bit more bearable with the information and support you gave to two extremely anxious parents and their families. Thank you all so much for looking after our little man so well during his 3 transfers and supporting us through the process. No words can portray how grateful we are to you all, you all played a big part in us being able to bring our son home, because for a time we didn’t know if we ever would. Thank you, thank you, thank you.”

“An incredible service – really helped in a difficult time.”

“Fantastic team, very caring. Had time to talk to other family members. I felt very confident that our newborn daughter would get the care she needed. Keep up the good work.”

“We are all so fortunate to have Embrace in Yorkshire and Humberside. Thank you. You made a huge difference to our family and what could have been a difficult time – you gave us confidence through your excellent provision, caring and thoughtfulness. We thank you from the bottom of our hearts.”

“Thank you for being so professional, caring and efficient.”

“I was unable to travel due to section not because of Embrace, an absolutely fantastic team. I am pretty sure my son would not have made it to transfer without them. It took 6 hours for them to get him safe to transport. We cannot thank you enough.”

“Thank you so much for transporting our son back to Sheffield Children’s. Knowing we had expert staff on board gave us peace of mind he would be in safe hands on the journey if anything changed.”

“The Embrace Team were brilliant, explained the whole process, answered questions, we felt more confident about the transfer. Our emotions were high waiting for hours for a bed at Leeds or Birmingham but understood you were doing everything possible to make it happen.”

“Transported 3 times and each time was so considerate and kind. Life savers. Actual heroes, don’t even want to imagine what would have happened without your assistance.”

“A massive thank you to them for understanding the importance of no parent leaving their child and the care they provided for my child. Massive thank you.”

“You provide an invaluable service. Your staff are brilliant and explain everything in detail. They feel like a ray of sunshine walking onto the ward.”
You said, we did

Communication difficulties between patients, families and healthcare staff can result in complaints, criticism and dissatisfaction with the service that has been provided. Therefore, following on from feedback received, Embrace has ensured the following actions have been completed.

- Guidelines are in place at Embrace to support staff care for family members travelling in the ambulance
- The Parent information booklet has been updated and now has the appropriate information pathways for contacting Patient Advice and Liaison Service (PALS)
- Parent information is available in the Embrace section of the Sheffield Children's NHS Foundation Trust web site and now includes the feedback form in an on-line format
- Maps and travel information/directions for family have been updated and are available on the website
- A parent information App, giving extra information about each hospital/neonatal unit, has been developed by the Yorkshire and Humber Neonatal ODN. This information is given to parents with the parent information leaflet
Embrace has developed its aeromedical transport capability and as a consequence there is greater interaction with other service providers. We therefore need to ensure that Embrace’s core values of family centred care are maintained.

- Parent leaflets are now available for both fixed wing and rotary air transfers
- As team members gain competence and confidence in air transport, there is now discussion on a case by case basis as to the appropriateness of taking a family member on the flight

The population of Yorkshire & Humber is culturally diverse and some families cannot speak or understand English so additional leaflets in Urdu, Bengali, Polish and Slovak have been produced.

**Sharing of feedback**

Parent feedback is reported quarterly to the Embrace Reference Group. In addition, the feedback and learning points are shared with Embrace staff and link nurses from across Yorkshire & Humber. Embrace have established links with the Patient Advice and Liaison Service (PALS) at SC(NHS)FT for parents who may wish for Embrace to provide a formal response.
Referring and receiving unit feedback

Feedback forms are available online, but once a year Embrace aims to produce a snapshot survey by distributing paper copies to referring and receiving unit teams. Forms were distributed over the two month period November-December 2017. The results are presented below.

Referring unit feedback to Embrace (n=77)

Respondent’s professional group:
HCA: 1
Nurse: 38
Specialist Trainee/ANP: 1
Consultant/Associate Specialist: 4
Unknown: 33

Was the Transfer Unplanned or Planned?

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree Nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unplanned</td>
<td>44%</td>
<td>56%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q1. The Embrace staff were highly professional
Q2. The Embrace staff answered all my questions appropriately
Q3. When I rang Embrace the call was answered promptly
Q4. Embrace clearly understood my needs
Q5. The Embrace staff seemed very knowledgeable
Q6. The telephone advice facilitated by Embrace was helpful
Q7. I had confidence in the abilities of the Embrace team
Q8. The Embrace team sought and respected my opinion
Q9. My overall assessment of this transfer experience is positive
Receiving unit feedback to Embrace (n=47)
Respondent’s professional group:
HCA: 2
Nurse: 29
Specialist Trainee/ANP: 2
Consultant/Associate Specialist: 0
Unknown: 14

**Was the Transfer Unplanned or Planned?**
- Unplanned: 28%
- Planned: 72%

---

**Q1. The Embrace Staff were Highly Professional**

**Q2. I was provided with all necessary information before the patients arrival**

---

**Q3. Embrace called us before departing the referring unit**

---

Q4. Embrace clearly understood my needs as a professional receiving the patient
Q5. The Embrace team provided a clear structured handover of the patient's problems
Q6. The Embrace team left copies of all relevant paperword and clinical records
Q7. I had confidence in the abilities of the Embrace team
Q8. My overall assessment of this transfer is positive

---
6. Clinical governance and quality improvement

Embrace has a robust clinical governance structure focused on safety and quality. We were successfully re-accredited for critical care transport by ground, fixed wing and rotary wing in October 2017 from the Commission on Accreditation of Medical Transport Systems (camts.org and camtseu.org).

Utilisation review
All referrals and transfers are reviewed the day after by a consultant to identify any issues that needs urgent action or clarification. Safety reports are completed and a trigger list flags up cases for more detailed analysis in a multi-professional forum.

Safety review meetings
Incident reports can be filled in by any member of the team and an open, just culture is promoted. All reports are initially reviewed by the Lead Nurse, acting as the Safety Officer and an appropriate action plan made. There is follow-up on the results of actions for all events at the monthly Safety Review Meeting to ensure loop closure is achieved. A summary is presented at the monthly Quality Improvement Meetings.

The reports are also reviewed weekly by the SC(NHS)FT incident grading group. Any re-grading, clarifications and further action points are communicated back to Embrace. Embrace is represented at the monthly Divisional Clinical Quality Meeting.

Quality improvement meetings
Monthly meetings chaired by the governance lead occur with representation from every staff group (medical, nursing, call handling and drivers). The meeting covers quality improvement, audit, service evaluation, guideline development, risk management, safety and equipment.

Our service partners also attend Embrace Quality Improvement Meetings on a rotational basis.
Quality improvement data
Embrace continues to submit data to three benchmarking organisations to help drive quality improvement. Links to the reports from these organisations can be found at embrace.sch.nhs.uk

a) Paediatric Intensive Care Audit Network (PICANet)
Every PICU and paediatric transport team in the UK and Eire submit quality data to this national organisation which publishes an annual report.

b) Neonatal Transport Group (NTG)
The UK Neonatal Transport Group collates data from every neonatal transport team in the UK over a 6 month period January to June every year. The annual returns are presented to allow comparison data and benchmarking relating to activity, key performance indicators and service provision.

c) Ground and Air Medical qUality Transport (GAMUT)
GAMUT is a US based database which tracks, reports and analyses performance on key transport specific quality metrics allowing comparison with other teams. Metrics apply to adult, paediatric and neonatal transport. It is hosted by Cincinnati Children’s Hospital with support from the Air Medical Physicians Association (AMPA) and the American Academy of Pediatrics Section on Transport Medicine. Embrace began submitting data in January 2015, the first transport service in Europe to do so.

Regional meetings
There is Embrace representation by a member of the consultant team at regional clinical expert groups and strategy group meetings. These include trauma, surgery, anaesthesia, paediatrics, critical care, neonatology and maternity services.

Embrace sit on the Neonatal ODN and Paediatric Critical Care ODN executive boards, as well as being represented at clinical forums.
Audit
All staff groups are encouraged to be involved in audit projects. Most Specialist Trainees carry out an audit project in their 6 month placement supervised by a consultant. Projects are registered through the Clinical Governance Department at SC(NHS)FT.

The majority of audits have resulted in changes to our practice and have been presented at local, regional and international meetings.

Completed & presented audit and service evaluation projects 2017/18

Level 1 Rolling projects

*Deep cleaning compliance audit*
J Dive

*NHSLA clinical record keeping*
S Palmer
PICANet
R Trent, F Rajah

Winter rota
C Harmer

GAMUT
S Hancock

Level 2 Trust/commissioned projects

Parental views of transport service
L Kay, J Hervo

Questionnaire for referring and receiving hospitals
J Sharpe

Level 3 National Accreditation projects

National Neonatal Transport Group (NTG) annual data return
C Harrison, S Hancock, F Rajah, R Trent

GAMUT Waveform Capnography QI Collaborative
F Rajah, S Hancock, F Brearley, N Evans

Level 4 Clinician and Divisional Interest

Embrace Difficult Airway Audit
K ur-Rahman, F Rajah, J Oldfield

Audit of Embrace Medical Call Co-Ordination Pertaining to Neonates and Children Referred for Paediatric Extracorporeal Membrane Oxygenation (ECMO)
Asrar Rashid

ReAudit of the Use of Prostin for Suspected Cardiac Duct Dependent Lesions
Davinder Singh

Audit of the Embrace Transport Risk Assessment Score
Ameen Shamsudeen

Activation and Mobilisation Times
Abigail Callender

Prospective survey of infants transferred for assessment and management of bilious vomiting in the first 7 days of life
Karen Spinks
The Use of Muscle Relaxant Infusions in Neonatal Transfers
Tamanna Williams

Retrospective Evaluation of Temperature Control in Children Following an Out of Hospital Cardiac Arrest during Stabilisation and Transport to PICU
Andrew Dickens

Mortality meetings
Embrace have monthly internal mortality review meetings. We also attend mortality & morbidity meetings in hospitals around our region when Embrace has been involved in the care of the infant or child. These are invaluable in developing relationships between Embrace and referring and receiving units and help to encourage a learning environment. Embrace also sit on regional ODN mortality review panels.

Guidelines
Guideline development is managed through a quarterly Guideline Group meeting. All guidelines are reviewed annually in-house, and 3 yearly through the SC(NHS)FT Quality and Audit department. Completed guidelines and standard operating procedures are ratified through the SC(NHS)FT Clinical Effectiveness and Audit Committee. Guidelines are available on SC(NHS)FT intranet and relevant guidelines are also available publicly on the Embrace website embrace.sch.nhs.uk

New guidelines 2017/18:

- EMB1704 Embrace procedures for use of a back up ambulance
- EMB1703 Arranging an ambulance to meet a flight
- 1839 Embrace guideline for use of inotropes in neonatal patients
- EMB1612 Preparing Referrals to be scanned protocol
- EMB1609 Abbreviation guidance
- EMB1701 Embrace rotas guideline
- EMB1706 Air Alliance fixed wing guideline
- EMB1611 Incident form completion guide
- EMB1422 Fatigue Management
- EMB1418 Embrace administration of blood or blood components during transfer
- EMB1503 Provision of pre-hospital care by Embrace at the scene of an accident
- EMB1505 Breast milk transportation and storage
- EMB1702 Health & Well-being guideline
- EMB1705 Vein of Galen guideline
- EMB1799 Embrace controlled drugs

**Research**

Embrace promotes a research culture and have encouraged the multi-professional team to collaborate on projects. A number of papers have been presented and published during 2017/18.

On-going research work includes:

**National research projects**

DEPICT – Differences in access to Emergency Paediatric Intensive Care and care during Transport [depiict-study.org.uk](http://depiict-study.org.uk)

Principle Investigator for Embrace: Fatemah Rajah

**Local Research Projects**

The use of inhaled nitric oxide therapy by a transport service

Fatemah Rajah, Karen Spinks, Sally Courtney, Claire McClean and Kalwa Munthali

**Publications**

Cath Harrison

In a resource-limited setting, is oral ibuprofen effective for closure of a patent ductus arteriosus in a preterm neonate?

Peter T Cartledge, Christian Umahoza, Catherine Harrison

*Journal of Tropical Pediatrics* 2017 [https://doi.org/10.1093/tropej/fmx085](https://doi.org/10.1093/tropej/fmx085)

Congenital renal tract abnormalities: a neonatal perspective

Prasad P, Agar C, Harrison C

*Infant* 2017; 13(3):100-104

Establishing a combined neonatal and paediatric transport system from scratch

Hancock, S. & Harrison C.

*Curr Treat Options Peds* (2018)4:119
Steve Hancock

Establishing a combined neonatal and paediatric transport system from scratch
Hancock, S. & Harrison, C.
Curr Treat Options Peds (2018)4:119

**Oral presentations**

ESPNIC, Lisbon, June 2017

Outcome of in-utero transfers
*K Munthali, C Harrison*

When do babies get cold in transport?
*C Vas, N Ramjeeawon, C Harrison*

**Poster presentations**

Retrieval, Glasgow, April 2017

Helicopter –based simulation training for an infant and children transport service
*I Braithwaite, P Gibbs*

Do Lights and sirens really save time?
*S. Basu, H Talbot*

**BAPM scientific meeting, September 2017**

Evaluation of the use of antenatal magnesium sulphate
*A.Shaw, H Talbot*

**Lectures, presentations, academic and community engagement**

Cath Harrison

*Session chair – QI projects*
REaSoN conference, July 2017

*Transport as a special interest*
*Training on the neonatal grid*
CSAC annual meeting, Birmingham, September 2017

*Ventilation strategies update*
Karabach Neonatal Society, Armenia, October 2017
Neonatal training pathway
How to develop a special interest
Perinatal Trainee Day, Royal College of Paediatrics, London, October 2017

Less Invasive Surfactant administration master classes
Manchester, January 2018
Leeds, January 2018

PROGRESS- the new curriculum
UK Neonatal Discussion Forum, March 2018

Early stabilisation and management of jaundice
Bukavu and Goma Hospitals, Democratic Republic of Congo, March 2018

Steve Hancock

Professorial poster rounds
International Pediatric Simulation Symposium and Workshops, Boston USA, April 2017

Children’s Transport in Major Trauma
Yorkshire Intensivists Meeting, York, June 2017

Management of paediatric trauma
Anaesthesia and Critical Care CPD Day, Barnsley, November 2017

Hazel Talbot

Workshop, premature baby resuscitation
DAS SMACC, SMACCmini, Berlin, June 2017

Neonatal airway training
Leeds Children’s Hospital, Leeds, June 2017

Premature baby resuscitation
Yorkshire Ambulance Service, CPD, Bradford, October 2017

Time critical neonatal transfer
Regional neonatal cardiac and time critical transfer day
Yorkshire & Humber Operational Network, October 2017

Jessica Oldfield

Chest drain insertion and management workshop
Regional Neonatal cardiac and time critical transfer day
Yorkshire & Humber Operational Delivery Network, October 2017


Chest drain insertion and management workshop
Regional Neonatal HIE and Encephalopathy
Yorkshire & Humber Operational Delivery Network, January 2018

Dealing with complaints and adverse outcomes (practical and emotional aspects)
PGDip Child Health, Leeds, February 2018

Experiences of communicating with parents and children using a language interpreter
PGDip Child Health, Leeds, March 2018

Sam Wallis

The Blue baby and saturation screening
Regional neonatal cardiac and time critical transfer day,
Yorkshire & Humber Operational Delivery Network, October 2017

Ray Trent

May 2017  Staincross Ladies Group; visit and tour of Embrace
June 2017  Forge Valley Community School, Sheffield; Inspire the Future
Oct 2017  Carrfield Primary Academy, Bolton Upon Dearne; Inspire the Future
Oct 2017  Hoylandswaine Mother's Union; Embrace talk
Oct 2017  Wombwell Methodist Church; Embrace talk
Oct 2017  Gooseacre Primary Academy, Thurnscoe; Inspire the Future
Oct 2017  Ecclesfield School, Sheffield; Inspire the Future
Nov 2017  Highgate Primary Academy, Goldthope; Inspire the Future
Jan 2018  Netherwood Academy, Wombwell, Barnsley; Inspire the Future
Jan 2018  Holme Hall Ladies Group, Chesterfield; Embrace Talk
Jan 2018  Darfield Mother's Union, Darfield, Barnsley; Embrace Talk

Jan Hervo

DKA audit
Yorkshire and Humber ODN Education Day, June 2017

Sepsis
Non-Medical Prescribing Event, October 2017
GCS project
Yorkshire and Humber ODN Education Day, November 2017
**International and national committees and working groups**

**Suzanne Palmer**  
UK Neonatal Transport Group  
PICS Nurse Manager's Group

**Steve Hancock**  
PICS Acute Transport Group  
ALSG NAPSTaR course working group member  
Board member, Air Medical Physicians Association (AMPA)  
Board member (AMPA representative), Commission on Accreditation of Medical Transport Systems - Europe

**Cath Harrison**  
Chair of UK Neonatology College Specialty Advisor Committee for RCPCH  
UK Neonatal Transport Group member  
UK NTG air group chair  
Member of RCPCH Invited Review Panels for UK  
Lecturer for RCPCH Improving Paediatrics study days  
Lead Neonatologist for Birthlink charity  
Management Board Member for LTHT charity, Optin  
NLS Course Director – Rotherham, Leeds, Gibraltar  
CESR advisor for GMC  
Editorial Board, Infant Journal  
Scientific Committee member REaSOOn  
MBRRACE case reviewer

**Fatemah Rajah**  
Embrace PICANet representative  
CAMTS EU site surveyor
Jessica Oldfield  
Training Program Director Paediatrics South (Diploma Course Support)  
Module organiser Communication & Management Skills, PGDip Child Health

Hazel Talbot  
Joint Guideline and Education Lead, Yorkshire & Humber Neonatal Operational Delivery Network

Ian Braithwaite  
Chair The Children’s Air Ambulance Equipment User Group  
DoH Nitric Oxide Tender Expert Group representative

Claire McLean  
DoH Nitric Oxide Tender Expert Group representative
7. Education and training

The on-going education and development of all team members remains a priority for Embrace. To achieve this goal the education team have developed an education plan reflecting SC(NHS)FT, PICS, NTG and CAMTS guidance to achieve local national and international standards.

This has been a year of change for the education team. Ian Braithwaite continued in the role, and was joined by Claire McLean in January 2018. Jo Whiston completed her secondment and returned to Embrace in February 2018.

The education plan has been delivered at both a trust level in mandatory training sessions and by the Embrace education team.

In-house education

A continued focus for the education team has been to maintain the requirements to achieve CAMTS re-accreditation. Clinical procedures highlighting high risk, low frequency events remain a key part of the education plan to maintain high standards of knowledge and skills throughout the Embrace team.

The Crisis Resource Management (CRM) courses have been utilised to reinforce key standard operating procedures and develop team situational awareness and communication.

Our competency document has been revised and updated to incorporate both neonatal and paediatric national standards. Rotating Specialist Trainees all completed the new competency document, attended the SC(NHS)FT induction for medical staff as well as a two week induction programme at Embrace combining theoretical knowledge and practical skills and scenarios training and testing.
We welcomed three new band 6 nurses to Embrace who also completed the competency package, and attended both neonatal and paediatric resuscitation courses. They had a supernumerary period of transition from observer to independent practitioner.

2017 saw the introduction of new ventilators to our transport trolleys. The Hamilton T1 ventilator was chosen as it is able to ventilate across our population of neonatal and paediatric patients, providing volume targeted ventilation, as well as High Flow Therapy and CPAP (continuous positive Airway Pressure). This was a major project from an education perspective, and Ian worked with ANP Karen Spinks in delivering initial training for all clinical staff in this new equipment, and providing ongoing support.

**Outreach education**

Members of the Embrace team from all disciplines have delivered regional outreach education in the form of talks, small group teaching, in situ simulation and OSCE’s covering the Embrace process, reviewing data and clinical cases. We have had an increasing number of observers visit and accompany the transport team from nursing specialities, anaesthesia, emergency medicine, neonatal and paediatric backgrounds.

Members of the Embrace team also provide their time and expertise to teach on accredited life support and resuscitation courses regionally, nationally and internationally.

- European Paediatric Life Support (EPLS)
- Advanced Paediatric Life Support (APLS)
- Neonatal Life Support (NLS)
- Advanced Trauma Life Support (ATLS)
- Paediatric and Infant Critical Care Transport (PICCTS)
- Sheffield Children’s Advanced Trauma (CAT)
- Generic Instructor Course (GIC)
- Advanced Resuscitation of the Newborn Infant (ARNI)
Embrace continues to work closely with the Neonatal and Paediatric Operational Delivery Networks to assist with the delivery of regional training relating to transport.

**Link nurse days**

We held three link nurse days over the year providing a platform for education and discussion for all nurses involved with resuscitation, stabilisation and transfer of neonates and children. These were well attended and are an ideal way to share information and learn. The days also provide a forum for clinical governance issues to be discussed and allow direct feedback to Embrace to help develop our service.
8. Charity

Embrace hold regular Charity meetings to discuss donations and the use of funds to improve the service and safety of our patients. We now write to people who have made contributions to thank them and inform them of what their generous donations have funded.

Many of the people who have donated to Embrace over the years have had family members transferred by the teams, and as a way of saying thank you, have raised fantastic sums.
9. Embrace in the news

12 April 2017
Louth Leader
Louth couple’s event to thank causes that helped their son Ellis.

27 October 2017
Digital Arts Online
Playful characters brighten up these ambulances for children

Bradford Telegraph and Argus
Family’s anguish as they are told 10-month-old baby Kia Gott will lose both arms and legs to meningitis

31 October 2017
Design Week
Illustrated children’s ambulances take to streets of Sheffield

10 December 2017
AirMed & Rescue Magazine
Air Alliance and Embrace enter strategic partnership

13 April 2018
Northampton Chronicle
Northamptonshire’s air ambulance charity welcomes positive CQC report
10. Work in progress for 2018/19

A number of projects are underway at Embrace for the year 2018/19

- Introduction of Datix incident reporting
- National Peer Review of the service by NHS England
- Introduction of new transport specific uniforms
- Increased research involvement with University colleagues, other transport teams and national programmes
- Use of data from Ground and Air Medical Transport qUality Transport (GAMUT), PICANET and NTG to focus and develop our service
- Securing access to a flight incubator for UK transfers
## 11. Appendices

### Appendix 1

**Embrace aeromedical utilisation data 2017/18**

<table>
<thead>
<tr>
<th>Year</th>
<th>Neonatal Team</th>
<th>Neonatal Patient</th>
<th>Paediatric Team</th>
<th>Paediatric Patient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>4</td>
<td>17</td>
<td>3</td>
<td>15</td>
<td>39</td>
</tr>
<tr>
<td>2018</td>
<td>13</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Type**

<table>
<thead>
<tr>
<th>Type</th>
<th>Neonatal Team</th>
<th>Neonatal Patient</th>
<th>Paediatric Team</th>
<th>Paediatric Patient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repatriation</td>
<td>4</td>
<td>17</td>
<td>3</td>
<td>15</td>
<td>39</td>
</tr>
<tr>
<td>Planned</td>
<td>13</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>14</td>
</tr>
</tbody>
</table>

**Acuity**

<table>
<thead>
<tr>
<th>Acuity</th>
<th>Neonatal Team</th>
<th>Neonatal Patient</th>
<th>Paediatric Team</th>
<th>Paediatric Patient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low dependency</td>
<td>14</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High dependency</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensive Care</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

**Reason**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Neonatal Team</th>
<th>Neonatal Patient</th>
<th>Paediatric Team</th>
<th>Paediatric Patient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENT/Airway</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haem/Onc</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurology</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Treatment Return</td>
<td>14</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prematurity</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Sepsis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

**Mode**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Neonatal Team</th>
<th>Neonatal Patient</th>
<th>Paediatric Team</th>
<th>Paediatric Patient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotary</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Fixed Wing</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

**Operator**

<table>
<thead>
<tr>
<th>Operator</th>
<th>Neonatal Team</th>
<th>Neonatal Patient</th>
<th>Paediatric Team</th>
<th>Paediatric Patient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>YAA</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Bristow</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>TCAA</td>
<td>1</td>
<td>14</td>
<td></td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>CEGA</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>IAS</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Air Alliance</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>YAA</th>
<th>SAR</th>
<th>TCAA</th>
<th>CEGA</th>
<th>IAS</th>
<th>Air Alliance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014/15</td>
<td>12</td>
<td>0</td>
<td>25</td>
<td>7</td>
<td>3</td>
<td>Air Alliance</td>
<td>47</td>
</tr>
<tr>
<td>2015/16</td>
<td>8</td>
<td>3</td>
<td>32</td>
<td>6</td>
<td>1</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>2016/17</td>
<td>11</td>
<td>3</td>
<td>19</td>
<td>8</td>
<td></td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>2017/18</td>
<td>5</td>
<td>2</td>
<td>21</td>
<td>1</td>
<td>6</td>
<td>Air Alliance</td>
<td>39</td>
</tr>
</tbody>
</table>
Appendix 2
Embrace organisational chart and team profile

Associate Clinical Director Surgery & Critical Care Division SC(NHS)FT – Mr Hesham Zaki

Associate Director Surgery & Critical Care Division SC(NHS)FT – Jim Butler

Embrace Lead Nurse – Suzanne Palmer

Embrace Lead Consultant (Neonates) – Dr Cath Harrison

Embrace Lead Consultant (Paediatrics) – Dr Steve Hancock

Locality Manager YAS – Andrew Flavell/Matthew Lomas
Appendix 3
Embrace staff profile

The Embrace team that delivers this front line service consists of:-

- Consultants from specialist backgrounds in Paediatric and Neonatal Critical Care who are skilled and experienced in managing the medical care of very sick infants and children

- Specialist Trainee doctors who rotate from the regional paediatric rota; these doctors bring with them general paediatric experience and they leave with enhanced skills in triage, leadership, stabilisation and transfer to take back to the regional hospitals

- Advanced Nurse Practitioners

- Nursing staff who have come from both neonatal and paediatric critical care backgrounds so have vast skills and experience in caring for critically ill babies & children

- Call handlers and a call centre manager to ensure that the telecommunications system runs smoothly; the call handlers provide a professional and reassuring first point of contact

- Yorkshire Ambulance Service (YAS) drivers; Embrace is an integrated team and the drivers play a key part ensuring the transfers are safe and efficient
Appendix 4
Embrace staff list 2017/18

Consultants
Dr Steve Hancock  Dr Cath Harrison  Dr Jessica Oldfield
Dr Fatemah Rajah  Dr Hazel Talbot  Dr Sam Wallis
Dr Dan Gilpin  Dr Chris Vas  Dr Louise Jordan
Dr Mo Gnanalingham

Specialist trainees
Dr Aimee Foster  Dr Amelia Shaw  Dr Anne Bean
Dr Eihab Abou-Ehid  Dr Kalwa Munthali  Dr Tallal Hussain
Dr Francis Kyeyune  Dr Christopher Beaves  Dr Rasheed Oba
Dr Mark Winton  Dr Umberto Piaggio  Dr Muhammed Ali
Dr Laura Dalton  Dr Neme Leton  Dr Victoria Dachtler
Dr Simon Davies  Dr Sandeep Budhiraja

Lead nurse
Suzanne Palmer

Clinical nurse educators
Jo Whiston  Ian Braithwaite  Claire McLean

Advanced nurse practitioners
Karen Spinks  Jan Hervo  Rose Kent
Nia Evans  Sally Courtney  Helen Doyle
Lydia Whiteman (trainee)  Jo Chubb (trainee)

Senior transport nurses
Jo Sharpe  Tracey Carolan  Ann Jackson
Michelle Pearsall  Karen Fletcher  Hayley Smith

Transport nurses
Alison Clay  Emma Gilpin  Jennifer Dive
<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charmaine Hamer</td>
<td>Natalie Webb</td>
<td>Natalie Wilby</td>
</tr>
<tr>
<td>Francois Brearley</td>
<td>Louise Kay</td>
<td>Chloe Fisher</td>
</tr>
<tr>
<td>Catherine McNeilly</td>
<td>Rebecca Russell-Ward</td>
<td>Victoria Webb</td>
</tr>
<tr>
<td>Rebecca Thompson</td>
<td>Justine Redhead</td>
<td>Caroline Duggan</td>
</tr>
</tbody>
</table>

**Call centre manager**

Ray Trent

**Call handlers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audrey Pike</td>
<td>Jesssica Butler</td>
<td>Jessica Medlam</td>
</tr>
<tr>
<td>Stacey Harwood</td>
<td>Sheila Holland</td>
<td>Deborah Newbould</td>
</tr>
<tr>
<td>Louise Roper</td>
<td>Amy Stephenson</td>
<td></td>
</tr>
</tbody>
</table>

**Administrative support**

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louise Pymer</td>
<td>Mark Leggott (Business Apprentice)</td>
</tr>
</tbody>
</table>

**YAS drivers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Howarth</td>
<td>Steve Holmes</td>
<td>Sally Mitchell</td>
</tr>
<tr>
<td>Steve O'Marr</td>
<td>Paul Summerscales</td>
<td>Paul Vickers</td>
</tr>
<tr>
<td>Lisa Walledge</td>
<td>Sally Levitt</td>
<td>Dan Douglas</td>
</tr>
<tr>
<td>Pete Fox</td>
<td>Lee Boyes</td>
<td>Julie Coddington</td>
</tr>
<tr>
<td>Fiona Thornton</td>
<td>Richard Eaton</td>
<td>Paul Fidler</td>
</tr>
</tbody>
</table>