The Rosie’s Neonatal Intensive Care Unit and Acute Neonatal Transport Service

Fundraising case for support

Helping our most vulnerable babies thrive

August 2017
Introduction

Over 5,000 babies each year start their lives in Cambridge’s Rosie Hospital, located next to Addenbrooke’s. Families benefit from its 120 maternity and women’s beds, its own theatre suite, foetal assessment unit, ultrasound department and neonatal intensive care unit.

The Rosie is the regional centre of excellence for maternity care and this was reflected in the recent Care Quality Commission report\(^1\) which said that “staff have a caring and compassionate approach. Women reported being treated with respect and dignity and having their privacy respected and dealt with in a sensitive manner across this service.”

As well as world-class staff, philanthropy plays an important role in the level of care that can be provided. Indeed, it was local entrepreneur, Sir David Robinson, who funded the hospital’s construction in the early 1980s. The hospital was subsequently named after David’s mother, Rosie. Kind donations continue to make a difference to new families today as they benefit from additional specialist staff, equipment, facilities, research and every day comforts only possible thanks to public support.

We are now seeking £153,000 for two services essential in supporting new-born, vulnerable babies across the east of England – the **acute neonatal transport service** (ANTS) and the **neonatal intensive care unit** (NICU).

Acute Neonatal Transport Service

ANTS is the regional transport service for the whole of the east of England and is based at the Rosie Hospital. The team is called into action whenever there is an acutely sick new-born who needs transporting to the Rosie’s NICU or another specialist unit.

Emergency transfers are facilitated by St John Ambulance (operating on a commissioned contract basis), who operate a team of modern state-of-the-art ambulances specifically designated for carrying such babies. Whilst St John’s provide the ambulance, the equipment and medical staff are provided by the NHS. The on-board team is made up of a combination of doctors, specialist neonatal nurses, neonatal nurse practitioners and the ambulance driver.

Unlike adult emergency ambulances, which have space for a trolley bed, these specially-designed vehicles need to be equipped with a neonatal transport incubator, kitted out with

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\(^{1}\) Cambridge University Hospitals NHS Foundation Trust Addenbrooke’s and the Rosie Hospitals Quality Report, 18 January 2017
specialist equipment to ensure that babies being rushed to hospital can be cared for appropriately and safely.

The ANTS service has three of these fully-equipped transport incubators and three specialist ambulances.

However, the service is at capacity and if one of the transport incubators is out of service for routine maintenance or repair one of the ambulances cannot operate.

A fourth incubator trolley is needed to ensure a full service can operate at all times. This will give the team the flexibility to respond to all calls for assistance. The trolley contains a number of key components as demonstrated in the graphic overleaf, the costings for which are summarised below.

### ANTS’ wish list

<table>
<thead>
<tr>
<th>Acute Neonatal Transport Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neopuff</td>
<td>£800</td>
</tr>
<tr>
<td>Incubator</td>
<td>£14,000</td>
</tr>
<tr>
<td>Tecotherm</td>
<td>£14,000</td>
</tr>
<tr>
<td>Fluid and drug infusion pumps</td>
<td>£20,000 (8 pumps at £2,500 each)</td>
</tr>
<tr>
<td>Trolley</td>
<td>£14,000</td>
</tr>
<tr>
<td>Ventilator</td>
<td>£33,000</td>
</tr>
<tr>
<td>NoxBox</td>
<td>£14,500</td>
</tr>
<tr>
<td>Humidifier</td>
<td>£1,500</td>
</tr>
<tr>
<td><strong>TOTAL FUNDING NEED</strong></td>
<td><strong>£111,800</strong></td>
</tr>
</tbody>
</table>
**Neopuff.** This simple machine allows the clinical staff to manually breathe for the baby whilst still carefully controlling the amount of gas being given.

- **Cost:** £800

**Incubator.** This is the basis of the transport equipment to keep the baby warm, secure and protected.

- **Cost:** £14,000

**Suction.** Removes any pooling of secretions to ensure airway is clear.

- **Cost:** £1,500

**Tecotherm.** This is a mattress which is used to keep the baby’s temperature very low. Cooling aims to give the brain a chance to recover from injury and so can have huge benefit long term for that baby.

- **Cost:** £14,000

**Monitor.** Allows staff to measure the baby’s vital signs.

- **Funded**

**Trolley.** The trolley enables movement between units and is custom made for the incubator.

- **Cost:** £14,000

**Pumps.** These are used to measure the drug volumes given which is critical for babies. Some babies need up to 9 pumps.

- **Cost:** £2,500 each

**Ventilator.** This provides all types and levels of breathing support for babies, as would be delivered in a specialist centre.

**Humidifier.** This warms the gas that the baby breathes to make sure the airway does not dry out and also cause the baby to get cold.

- **Cost:** £14,500

**NOxBOX.** This helps safely deliver and monitor nitric oxide and is only given in the three specialist centres.

- **Cost:** £33,000
Neonatal Intensive Care Unit

All parents hope that their babies will be healthy. Yet sometimes problems arise that require their beloved new-born to be admitted to the NICU for treatment. Being born prematurely, having a difficult delivery or antenatal concerns are all reasons a baby might be admitted.

The sickest and most vulnerable come to The Rosie. The unit is specially designed and equipped to care for the most critically ill babies and staff receive referrals not just from within the east of England but, where necessary, from outside of the region too. Staff on the unit also provide specialist neonatal neuro-critical and neurosurgical care.

How long babies stay on the unit varies depending on their individual needs. The care they receive is likely to be very intensive and doctors, nurses and other health professionals rely on some of the latest equipment to help ensure they recover as well and as quickly as possible.

Some of this goes beyond what the NHS will ordinarily fund. Thanks to the generous support of donors and fundraisers, Addenbrooke’s Charitable Trust (ACT) has been able to frequently support NICU staff in purchasing important pieces of equipment.

Further help is now needed to buy important life-enhancing and, in some cases, life-saving equipment.

Video laryngoscopes
There is often a need to intubate sick babies. Intubation is the insertion of a flexible plastic tube into the windpipe which then serves to maintain a clear airway and, sometimes, provide a means to administer drugs.

It can be challenging to insert these tubes into adults. When this is done on small babies this challenge is multiplied. The traditional approach depends on the use of a tool referred to as a blade. This blade helps to guide the tube into the correct location. This is only done by feel and not by sight. The size of a baby’s mouth and the angle of access makes any visual guidance impossible. This makes the process difficult, and training for doctors and nurses very challenging.

Trial and error is not really a viable option as repeated incorrect attempts can cause soreness of the throat or, at its worst, damage to the vocal cords causing sometimes irreversible damage to speech.
The video laryngoscope resolves these issues. A tiny video camera live-streams the image to a cot-side screen. From this the person inserting the tube can visualise what they're doing, minimising the length of time it takes to do it. It’s also very helpful from a training perspective. Nurses and junior doctors can be trained to perform the insertion under the guidance of an experienced colleague, with the guidance being given based on what they can see in real-time on the screen.

ACT has already supported the purchase of three of these video laryngoscopes and one accompanying screen. However, the demand is such that on occasion staff need to revert to the non-video alternative. We are therefore now seeking funding for three additional video laryngoscopes and one additional screen. This will ensure that this facility is always available when required.

Video laryngoscopes are £4,500 each, but we have been offered a price of £11,000 for three laryngoscopes and a monitor screen if they are all purchased at the same time.

**Carbon dioxide ventilator monitors**

Monitoring carbon dioxide levels in babies in NICU is essential to ensure that they are receiving adequate ventilation. Currently this is carried out by attaching a probe to a baby’s skin.

There is an alternative non-invasive system that measures the levels of exhaled carbon dioxide within the ventilator system without the need for probes attached to the skin. NICU need twelve of these systems, which comes as an upgrade module to the existing ventilator system.

Each carbon ventilator module is £2,100.

**Peaceful spaces for parents and families**

Poorly babies can sometimes be on NICU for weeks or even months. Some may be local, while others travel in from Norfolk, Suffolk and sometimes even further afield. For parents and families, nothing is more important than being by their baby’s cot side, but this can be a traumatic time, particularly if they’re far from home.

The NICU provides a spacious parents’ room; a respite away from the hustle and bustle and somewhere they can share their experiences and provide mutual support.

The unit also has a quiet room which staff can use for private conversations with families. This room can be where families receive bad news and it is designed to be as non-clinical and comfortable as possible.

But both rooms are in urgent need of a refresh, and tired and worn out furniture needs replacing. Some funds have already been raised for this, but we are now seeking an additional £5,000 to make these improvements happen and enhance the comfort and experience of worried and exhausted parents. The changes needed include:
Parents’ room

- Cushions to make the area feel more homely
- Repaint the room in less clinical colours
- Introduction of a water machine and toaster

Quiet room

- Replacements for worn leather-style chairs
- A replacement sofa more fitting with the room
- Introduction of art onto the walls to make them feel less clinical
- A low-level sideboard with cupboards to discreetly store things like advice leaflets, counselling flyers and tissues

NICU’s wish list

<table>
<thead>
<tr>
<th>Neonatal Intensive Care Unit</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video laryngoscopes</td>
<td>11,000</td>
</tr>
<tr>
<td>Carbon dioxide ventilator monitors</td>
<td>25,200</td>
</tr>
<tr>
<td>Quiet room and parents’ room</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>TOTAL FUNDING NEED</strong></td>
<td><strong>41,200</strong></td>
</tr>
</tbody>
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Will you help our vulnerable babies?
We very much hope that you will support this vitally important programme. To donate, please visit [www.act4addenbrookes.org.uk/donate](http://www.act4addenbrookes.org.uk/donate) (and click ‘other’ in the ‘About your donation section’, putting NICU/ANTS in the free text box). Alternatively, please send a cheque to the address below made out to: ACT NICU/ANTS.

If additional funds are raised over and above our target for this campaign, we will ensure that your support is directed to equally deserving projects. To discuss any aspect of the appeal in more detail, please contact Samantha Sherratt at ACT on 01223 348462 or by email at samantha.sherratt@act4addenbrookes.org.uk.

Thank you for your support

Addenbrooke’s Charitable Trust
Box 126, Addenbrooke’s Hospital, Hills Road, Cambridge, CB2 0QQ
Registered charity number 1170103
About Addenbrooke’s Charitable Trust

Addenbrooke's Charitable Trust (ACT) is the only registered charity dedicated to supporting innovation in patient care across Cambridge University Hospitals NHS Foundation Trust (CUH), which runs Addenbrooke’s and the Rosie hospitals.

Addenbrooke’s and the Rosie are ranked among the world's best academic healthcare organisations. ACT's aim is to build on these achievements by raising extra funds for cutting-edge technology, additional specialist staff, environmental enhancements and more comforts for patients beyond what is possible with NHS funding alone. ACT also provides seed funding for early stage research projects, supporting the hospitals' clinical academics to embark on research that can lead to advances in treatment and global cures.

Hospital staff are wholly focused on fulfilling their patient commitment. However, as across the NHS, the Trust is under constant pressure to make savings and drive efficiency. In practice, there is less funding to invest in patient care solutions considered non-essential, including many of the pioneering practices underpinning the additional excellence for which CUH is renowned. Now, more than ever, charitable support is essential if patients are to continue to benefit from innovative approaches that translate into higher quality care and improved outcomes.