Newborn Intensive Care Medical Unit

The Newborn Intensive Care Medical Unit within Saint Mary's is the major regional centre in Greater Manchester specialising in the care of very premature and sick term infants. It also provides specialist care and advice for infants across Greater Manchester and surrounding areas.

The Newborn Intensive Care Medical Unit is located on the 5th floor of Saint Mary’s Hospital and is adjacent to the Newborn Intensive Care Surgical Unit.

Along with specialist care for babies born following antenatal management by the Fetal Medicine Team, we also care for babies who have a wide range of other medical conditions including:

- Extreme prematurity from 22 weeks gestation and above
- Complex respiratory disease
- Complex cardiac problems
- Serious gut disorders
- Complex renal and metabolic problems
- Congenital chromosomal abnormalities
- Significant neurological problems

The Newborn Medical Unit is divided into three main areas: Intensive Care, High Dependency and Nursery. There are 31 cots in total with 14 intensive care cots, three high dependency cots and 14 special care cots.

The caring, busy unit has an extremely strong reputation – locally, nationally and internationally. The unit also hosts the Greater Manchester Neonatal Network Transport service - a 24 hour service providing intensive care transport to all hospitals in the Greater Manchester Network Zone.
**Newborn Intensive Care** –
In this area most babies are treated receiving assisted ventilation. The majority of babies are admitted to the unit due to the complications of prematurity such as recurrent apnoea, respiratory distress requiring ventilation, septicaemia or difficulties resulting from a range of maternal problems.

**Newborn High Dependency** –
This room has space for up to 12 babies. Whilst in here parents are more relaxed and are able to continue caring for their babies in a more restful atmosphere after their intensive care stay. Most babies in here may still be on small amounts of oxygen, receiving tube feeds or relatively uncomplicated treatments such as phototherapy.

**The Nursery** –
From the high dependency room as babies continue to grow they then progress to the nursery area. Most babies in here are bottle or breast fed and are almost ready for home.

There are also four parent bedrooms where mums and dads can stay to be near their baby when they are receiving intensive care or when they are ready to go home. There are double and single rooms, some of which are en suite; kitchen facilities are also available nearby.

**Support services**
The unit also has several nursing led developments for the support of staff and families.

- A regional service for diagnostic screening for retinopathy of prematurity (ROP) and choice of treatment by cryotherapy or laser.
- Nurse led audiology screening and immunisations service.
- Technical Services Department which is situated on the Newborn Medical Unit and provides a 24-hour service with a structured teaching programme for medical and nursing staff.
- Community Outreach Services - including home oxygen therapy
- Education team to ensure nursing staff are supported in their ongoing educational needs.
- Specialist advice and support service for breast feeding and expressing breast milk for the premature baby.
• Bereavement support service, endorsed by the Child Bereavement Trust.
• Parents support service, which also provides confidential counselling for parents and staff.
• Nurse research post.

Community Outreach Team
This is a citywide service caring for the preterm, low birth weight infant and other high risk babies following their discharge from hospital. Managed from Central Manchester and Manchester Children’s University NHS Trust (of which Saint Mary’s Hospital is part) it covers North, Central and South Manchester and is available for infants and mothers who reside within the city boundaries. Referrals are taken mainly from Saint Mary’s Hospital, North Manchester General Hospital and Wythenshawe Hospital. Referrals are also taken from Community Midwives, Health Visitors and hospitals outside the Manchester border. Although the Community Team is managed by the Neonatal Medical Unit at Saint Mary’s the midwives also spend time on a regular basis visiting North Manchester General and South Manchester Hospitals.

Care is provided seven days a week from 8.30 am to 4.30 pm. Home visits are undertaken to families who have babies born preterm, small or compromised in some other way. The visit consists of giving any postnatal care necessary to the mother plus close monitoring of the baby – for example, weight, feeding patterns, general health. Any special needs of the baby are also addressed at the visits, for example tube feeding or babies requiring oxygen at home. The Service also provides pre-discharge home visits to the families of these vulnerable babies to give advice on home preparation prior to their discharge from hospital. The families are given a contact number so that they can speak to their midwife whilst she is on duty and the number is staffed 24 hours through the Saint Mary’s Hospital radio telephone room. The Service is staffed at present by one Team Leader, six midwives and two nursery nurses. All are registered nurses, registered midwives and have additional neonatal qualifications. Two of the staff are also registered sick children’s nurses.
Screening Services
Saint Mary’s Newborn Intensive Care Medical Unit offers a comprehensive range of screening services including:

- **Retinopathy of Prematurity Service**: this allows the screening of preterm infants at risk of developing this potentially sight-threatening eye condition and subsequent intervention if required using a team approach involving specialist neonatal doctors, neonatal ophthalmologists and a specialist nurse co-ordinator.

- **Hearing Screening Service**: this incorporates the National hearing assessment framework used in detecting congenital or neonatally acquired permanent childhood hearing impairments. It enables follow up for infants with unilateral or mild hearing impairment and those at risk of progressive impairments through the use of a rigid referral process.

- **Immunisation Service**: a proportion of infants require a long term hospital stay due to the nature of their clinical condition. This service aims to provide routine immunisation to these infants to ensure their primary vaccinations are up to date and provide the earliest possible protection for these vulnerable infants.

- **Seasonal Respiratory Clinic**: a small number of infants remain vulnerable particularly during the winter season to contracting respiratory virus’s which can lead to re-admission to hospital and a lot of distress for parents. This service identifies these infants while still in NNMU/Community and administers specific medication to reduce the incidence of a respiratory virus during the winter. Using a multi-disciplinary approach of doctors and nurses provides guidance and support to the families involved.

Bereavement Support Service
Saint Mary’s Hospital Newborn Services established a dedicated bereavement service in 1995. The service has since evolved to provide a comprehensive range of family and staff support.

The service aims to:

- provide care for families during the terminal phases of their baby’s life
- enhance the care and support offered to grieving families, including siblings
- provide support and education for staff in this demanding area of work
- seek the views of families and staff members for means of improving the service
The team comprises of three experienced neonatal sisters and a neonatal counsellor, who offer psychological and physical support during end of life care and support following an infant death. One of the aims of the team is to empower all staff to care for babies around the time of the death of a baby.

The bereavement team will visit any family irrespective of the area they reside in. The period of contact and frequency is variable and dependent on the needs of the family.

The aim of the visits is to provide practical support and information to the families regarding any issues associated with their baby. This includes further explanation on their baby’s illness, funeral arrangements, and liaising with other members of the hospital team. When a baby dies it is a very sad, traumatic and emotional time and the member of the bereavement team encourages the family to talk about their baby, recognising the importance of the baby within the family.

The neonatal counsellor is available to all families admitted to the neonatal unit, providing confidential support and counselling on a longer-term basis. Families' can self refer to the counsellor, or a member of the team will make a referral following a discussion with the family. Grief is unique to everyone and bereavement counselling is tailored to each individual parents needs. The counsellor is able to see families in the hospital; however families usually prefer visits in their own home. Confidential staff support is also available to staff as we recognises the needs of staff working in such a pressured environment.

Apart from the support to families, the Bereavement Team aims to equip all members of staff to care for terminally ill babies and their families by

- facilitating multi-disciplinary education programmes, providing training on loss bereavement and communication issues.
- reviewing unit policies and practices to keep up to date with local and national guidelines.
- developing a lending library of books, DVD’s and bereavement resources that are available to both families and parents.
Clinical Education Department

The Clinical Education department is responsible for creating and maintaining a positive education culture on the Newborn Intensive Care Medical Unit.

The Education Team delivers:

- Comprehensive induction programmes for new starters incorporating theoretical and practical aspects of care.
- All in-house education - designed to meet the career pathway needs of all grades of staff.
- All student nurse / midwife placements
- Educational support and career guidance to all nursing staff
- Participation in multi-disciplinary education
- Study leave and funding for courses, conferences, workshops and degree modules
- Records of all study hours staff members have attended to assist them in meeting PREP requirements
- In conjunction with University of Manchester, coordinate and deliver the R23 course 'Enhancing Neonatal Nursing Practice'

For further information about the Clinical Education Department please contact Chris Ashworth (Senior Clinical Nurse Educator) on 0161 276 6356/7
The Senior Medical Team

There are seven specialist Consultant neonatologists who lead the team who care for the infants admitted to the Newborn Medical Unit.

**Consultant Neonatologists**

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<th>Name</th>
<th>Title</th>
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<tr>
<td>Dr Anthony JB Emmerson</td>
<td>Clinical Director of Newborn Services</td>
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<tr>
<td>Dr Ngozi Edi-Osagie</td>
<td>Clinical Lead for the Newborn Medical Unit</td>
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<tr>
<td>Dr Ian Dady</td>
<td>Clinical Lead for the Greater Manchester Newborn Transport Service</td>
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<tr>
<td>Dr Simon Mitchell</td>
<td>Consultant Neonatologist</td>
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<td>Dr Ruth Gottstein</td>
<td>Consultant Neonatologist</td>
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<tr>
<td>Dr Suresh Victor</td>
<td>University of Manchester Lecturer</td>
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<tr>
<td>Dr Srabani Samanta</td>
<td>Honorary Consultant Neonatologist</td>
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There are also 10 registrar doctors in training who support the clinical work of the department along with 17 junior doctors in training who work across both the Newborn Medical and Newborn Surgical units. In 2006 there were 11500 days of care given of with just under 3000 days of intensive care. 695 babies were admitted of which 321 received intensive care of which 103 were under 1000g birth weight. The survival for babies 500-600g was 71% and 74% for those of 700-800g, and >94% for those 1000g and over.
**Nursing Team**

There are approximately 140 members of nursing staff employed on the unit as senior sisters, senior neonatal and junior staff nurses by 5 assistants and a team of nursery nurses.

We also have a team of receptionist/cot bureau coordinators and secretaries, a Lead Nurse who has management and Modern Matron responsibilities and a Senior Clinical Educator who leads the clinical education team. Of the nurses/midwives employed on the unit 75% possess a qualification in speciality which is the intensive and high dependency modules in care of the neonate. We also have approximately 30 senior staff who have undertaken the Enhancing Neonatal Nursing Practice Course, these staff are highly skilled in specialist techniques such as intubation intravenous access. In order to guarantee comprehensive care of neonates and their families we maintain a skill mix of children's nurses, general nurses, midwives and nursery nurses within the establishment. Nurses and midwives who have no experience of neonatal care are welcomed to the unit and are supported through our comprehensive induction programme.

The nursing staff have several forums to ensure the provision of high quality evidence based nursing care, for example the Clinical Practice Group who meet quarterly to update and formulate new nursing guidelines and policies and the Developmental Care Group ensure our nursing practice is in line with current trends for example, positioning and skin to skin care.

**Key Nursing Staff**

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<thead>
<tr>
<th>Angela Carton</th>
<th>Chris Ashworth</th>
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<tr>
<td>Lead Nurse/Modern Matron</td>
<td>Senior Clinical Educator</td>
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<th>Jayne Donnelly</th>
<th>Julie Flanagan</th>
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<tr>
<td>Bereavement Support Service</td>
<td>Retinopathy and Screening Lead</td>
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Any member of staff may be contacted on the unit telephone numbers 0161 276 6356/7
Research

The staff at the Newborn Services have a strong commitment to research as a means of improving outcome for our patients and their families. All consultants on the Newborn Intensive Care Medical Unit have research interests. The hospital in collaboration with the University of Manchester has recently established an academic position on the neonatal medical unit. The position is currently held by Dr Suresh Victor, Clinical Lecturer and Honorary Consultant Neonatologist. His research focus includes neonatal neurology, neonatal electroencephalography, near infrared spectroscopy and magnetic resonance imaging of the brain.

Information for parents

During your baby’s stay in the Newborn Intensive Care Medical Unit, you and your baby may be eligible to participate in one or more research studies.

Agreeing to take part in a research project is your decision. You may be approached by a researcher for your consent to participate with your baby in a project. You should fully understand the purpose of the project and the extent of your involvement before giving consent. Please feel free to discuss any questions you may have with the person representing the study. You may also discuss any research project with the attending physician caring for your baby.

All studies taking place on the Newborn Intensive Care Medical Unit have the approval of the doctors and nurses caring for your baby and meet the highest standards of scientific and clinical excellence. Full approval from regulatory authorities would have also been obtained prior to you being approached.

Your baby's best care will always be our top priority. If you decide not to participate in a research project it will not affect the care your baby receives. If you have any questions or concerns that have not been answered to your satisfaction by the research and clinical team, you might find it helpful to contact the Patient Advice & Liaison Service (click here or look at our website under, Patient Advice).

Information for the public

We aim to involve patient and public participation in the development of quality research culture on the Newborn Intensive Care Medical Unit. Parents who have had their babies looked after on the Newborn Intensive Care Medical Unit are able to offer different perspectives. We often need your participation in the design and conduct of research projects. You can also involve yourself by providing feedback to us about your experience as a research participant.

If you wish to involve yourself with the on-going research on the Newborn Intensive Care Medical Unit please contact Dr Suresh Victor (E-mail: suresh.victor@cmmc.nhs.uk). For further information on how to participate in research please visit http://www.peopleinresearch.org/

Information for industry and research partners

We have extensive experience in conducting clinical trials on the Newborn Intensive Care Medical Unit. We aim to participate in studies adopted into the UKCRN study portfolio. For further information on how to get your study adopted please visit http://www.ukcrn.org.uk/index.html. For studies not suitable for adoption by UKCRN please contact Dr Suresh Victor (E-mail: suresh.victor@cmmc.nhs.uk)
Research themes
Current research themes include:
1. Role of stress in the neurodevelopment of growth restricted babies
2. Determinants of diffuse brain injury in premature babies
3. Role of neonatal electroencephalography in continuous brain monitoring in premature babies
4. Development of new treatment strategies for amelioration of bronchopulmonary dysplasia
5. Techniques aiming to improve thermal stability of newborn babies
6. Role of end tidal carbon dioxide monitoring in resuscitation and transport

Publications
Local dissemination of research findings is achieved through a programme of regular meetings held every Monday afternoon. Research is disseminated nationally and internationally at conferences and via peer reviewed publications. Papers published by our consultants in the last five years include the following:

2008

2007

2006

2005

2004