**Guidelines for Infants from the Neonatal Service Going Home In Oxygen**

<table>
<thead>
<tr>
<th>Full Title of Guideline:</th>
<th>Guidelines for Infants from the Neonatal Service Going Home In Oxygen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author (include email and role):</strong></td>
<td>Dr Jayesh Bhatt, Ms Heather Nelson</td>
</tr>
</tbody>
</table>
| **Division & Speciality:** | **Division:** Family Health - Children  
**Specialty:** Neonatology |
| **Scope (Target audience, state if Trust wide):** | Neonatal medical, nursing, family care and continuing care teams |
| **Review date (when this version goes out of date):** | September 2022 |
| **Explicit definition of patient group to which it applies (e.g. inclusion and exclusion criteria, diagnosis):** | Neonates being discharged home in oxygen |
| **Changes from previous version (not applicable if this is a new guideline, enter below if extensive):** | V3: This version incorporates arguments for oxygen saturation targets, updates the practical aspects of referral to paediatric respiratory team and discharge planning |
| **Summary of evidence base this guideline has been created from:** | British Thoracic society guidelines for home oxygen in children (1) |

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**This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date or outside of the Trust.**

1. **Introduction**

1.1 **Aims and target audience**

The aims of these guidelines are to present the evidence base for the practice of administering supplemental oxygen to infants at the time of discharge from NICU and outside hospital and to make recommendations for best practice. The target audience is
clinicians who prescribe home oxygen for infants principally in hospital practice. It is also intended for other professionals involved with the whole process, which includes neonatal nurses, community neonatal and paediatric nurses, physiotherapists, occupational therapists and neuro-disability specialists.

1.2 Methodology for generation of the guidelines
These guidelines are generated / adapted from the BTS (British Thoracic Society) guidelines for home oxygen in children(1).

2. Summary of Background
There is much debate about the correct oxygen saturation targets to use for preterm babies whilst they are receiving intensive care. This may be different for babies in the early stages of their treatment after birth and later at the time of discharge. This guideline is aimed at managing preterm neonates who have developed chronic lung disease of prematurity (CLD) (also known as chronic neonatal lung disease (CNLD) or bronchopulmonary dysplasia (BPD)). The target oxygen saturations recommended in this guideline applies to neonates beyond 36 weeks post menstrual age. A discussion of correct oxygen saturation targets for preterm infants under 36 weeks postmenstrual age whilst receiving intensive care (see oxygen saturation guidance Nottingham Neonatal Service) is beyond the remit of this guidelines.

Definition:
Since the original description by Northway (2), this condition has evolved reflecting the changes in the care of the preterm neonates and several clinical (dependency on oxygen at 28 days of age with any radiographic abnormality(3) or at 36 weeks postmenstrual age(4), more stringent physiological (5) and severity (mild, moderate, and severe) based oxygen use and/or respiratory support at 36 weeks’ PMA (or 56 days of age for infants at ≥32 weeks’ gestational age) (6–8) definitions have evolved over time.

Not only the definitions have evolved over time, but whether or not CLD gets reported as an outcome measure (9,10) and the prevalence of the condition has been variably reported with a 4 to 5 fold institutional variation (11) and likely underreported(12). The reported prevalence varies from 10 to 68 % (13–17) and recent large multicentre studies report that there is an increase in the prevalence(16,17).

The need for supplemental oxygen is at the crux of all definitions.

Observational studies in babies with CNLD who are post 36 weeks conceptual age have shown that they are at greater risk of readmission and complications. The aim of maintaining target saturations in these infants is normalisation of growth, improved growth velocity and comparable growth patterns compared with preterm babies without CLD(18–21).

Pulmonary hypertension is frequently diagnosed in infants with CLD (22) and is associated with significant morbidity and mortality. It may precede and contribute to prolonged
ventilation needs and CLD. The arguments for higher oxygen saturations come from the risk of pulmonary hypertension as a result of hypoxaemia. These studies suggest that levels below 90% should probably be avoided and levels above 94% may be protective (23-25) and the potential risk of an increased incidence of apparent life threatening events as a result. Two observational studies have studied oxygen saturations and SIDS / ALTE. Iles et al showed that infants with mean saturations below 90% or with more variability were more likely to have readmission and ALTE / SIDS (26). Gray et al showed no difference in rates of sudden infant death in infants on oxygen or gestation matched controls in air (27).

2.1. Normal oxygen saturations:
1. Oximeters from different manufacturers may give different oxygen saturation readings depending on whether fractional or functional oxygen saturation is being measured and the calibration curve used by that particular brand of oximeter.
2. The median baseline saturation in healthy term infants during the first year if life is 97-98%.
3. The arterial oxygen saturation measured by pulse oximetry (SpO2) is < 90% for > 4% of the time in only 5% of healthy infants.

2.2 Consequences of chronic low oxygen saturation (1)
1. Hypoxaemia causes pulmonary hypertension but the precise severity and duration of hypoxaemia needed to do this are not known. The factors affecting individual susceptibility are also unknown.
2. SpO2 levels >94-95% appear to reduce pulmonary hypertension in infants without cyanotic congenital cardiac defects and idiopathic pulmonary hypertension.
3. Hypoxia may have adverse effects on cognition and behaviour at SpO2 levels of <85%, but the effects of milder hypoxia are less clear.
4. In infants with chronic neonatal lung disease (CNLD) SpO2 <90% is associated with increased risk of apparent life-threatening events while SpO2 >93% is not
5. In infants with CNLD, SpO2 <92% may be associated with suboptimal growth.
6. In infants with CNLD, SpO2 <90% impairs sleep quality but SpO2 >93% does not.

2.3 Consequences of excess oxygen therapy
Preterm infants are highly sensitive to the harmful biochemical and physiological effects of oxygen. While oxygen is essential for metabolism, its by-products – free radicals and reactive oxygen species – cause tissue injury. Toxic oxygen radicals are increased in hyperoxaemia and in re-oxygenation after hypoxaemia. Premature infants are vulnerable to oxidative stress because they lack antioxidant protection in the form of plasma radical scavengers. Excessive oxygen therapy in preterm infants is associated with retinopathy of prematurity, periventricular leukomalacia, and chronic lung disease.
However, the optimum range of arterial oxygen to minimise organ damage, without causing hypoxic injury, in very premature infants is unknown and excess levels must be avoided by appropriate monitoring and adhering to the target SpO2 level.

### 2.4 Oxygen Targets

The following targets are therefore a compromise between these risks and benefits. Infants going home on oxygen are above 36 weeks gestational age and the risks of ROP and PVL have disappeared by this stage. Maintaining a saturation which prevents pulmonary hypertension is felt to be more important.

Target Oxygen Saturations for Babies on NICU (see Appendix)

Target Oxygen Saturations for Babies > 36 weeks gestation going home in oxygen

- The SpO2 should not fall below 90% for more than 5% of the artefact-free recording period.
- In CNLD, oxygen therapy should be given to maintain an average SpO2 of 93%.
- Fluctuations in oxygen saturations on the tracing should occur for less than 4 % of the time of the pulse oximetry (overnight pulse oximetry study).

### 3. Indications for long-term oxygen therapy (LTOT)(1)

#### 3.1 Chronic neonatal lung disease

Supplementary oxygen should be given to infants with chronic neonatal lung disease:

- a. to reduce or prevent pulmonary hypertension, reduce intermittent desaturations, reduce airway resistance and promote growth;
- b. as it is likely to be beneficial for neurodevelopment in infants with CNLD;
- c. as it may reduce the associated risk of sudden unexplained death in infancy;
- d. as oxygen at home is preferable to a prolonged hospital stay for both quality of life and psychological impact for the infant, parents and family;
- e. as it saves days in hospital due to earlier discharge despite readmissions.

#### 3.2 Other neonatal lung conditions

Home LTOT should be offered to infants with other oxygen dependant neonatal lung conditions who are otherwise ready for hospital discharge. Discussion on care pathways and ultimate decision on home oxygen for infants with other conditions is led by medical staff.

#### 3.3 Pulmonary hypertension

- a. In idiopathic pulmonary hypertension, supplementary oxygen is recommended for sleep-associated desaturations and for emergency use.
b. LTOT is recommended for pulmonary hypertension secondary to pulmonary disease.

3.4 Palliative Care
LTOT should be considered for those hypoxaemic infants undergoing palliative care who obtain symptomatic relief from supplemented oxygen.

4. Assessment for the need for LTOT and target oxygen saturations for chronic lung disease (Appendix 1 - Home oxygen care pathway)
The use of the oxygen at home pathway should be discussed by nursing staff with consultant on service or senior doctor for infants who are still receiving nasal cannula oxygen and are 36 weeks gestation and the following

4.1 Referral to Specialist
Referral to Respiratory Specialist Paediatrician should be done via electronic request once it is established that an infant may have an indication as above for LTOT. Appendix 2 shows information needed to complete the electronic referral via Notis.

4.2 Setting of saturation levels on monitors
Set lower limit at 94% and set upper limit as OFF and record all episodes of desaturations less than 94% and adjust level of oxygen administered to baby accordingly until baby responds and is stable desaturations stabilise. Prescribe set level of oxygen. In CNLD, oxygen therapy should be given to maintain an average SpO2 of 93.

4.3 Overnight pulse oximetry study (sleep study)
This should be used for assessing infants. This may be undertaken at approximately 36 weeks gestation (corrected age).

- If infant in 0.1LPM (Litres per minute) or more of nasal cannula oxygen the overnight pulse oximetry study should be done in 0.1 L/min or at level of nasal cannula oxygen infant currently stable in. The level of oxygen should be maintained at a constant level during the pulse oximetry study.

- If the infant is in less than 0.1LPM of nasal cannula oxygen(5), it would be appropriate to delay the overnight pulse oximetry study till 38 weeks post menstrual age. In these circumstances, two scenarios are most probable:
  
  a) If the baby is still needing oxygen, then the oximetry should be done in a minimum of 0.1LPM oxygen unless otherwise indicated by Respiratory Specialist Paediatrician
  
  b) If the baby has outgrown the oxygen requirement, an overnight oximetry study should be done (in air) to ensure that the target saturations are met as if these are not met then it would be good practice to send baby home in oxygen.
• Infants should be assessed with pulse oximetry for at least 6-8hrs and during all levels of activity, including sleeping and feeding. Relevant pulse oximetry activity chart should be used to record activity and observations during the pulse oximetry study (Appendix 2). The infants weight on the day of the sleep study should be recorded.

4.4 Review of the overnight pulse oximetry study
The overnight pulse oximetry study should be reviewed by Respiratory Specialist Paediatrician accompanied by its activity chart (Appendix 2) in order that an assessment of the level of oxygen required for the infant to sustain the following targets be made:

- The SpO2 should not fall below 90% for more than 5% of the artefact-free recording period.
- In CNLD, oxygen therapy should be given to maintain an average SpO2 of at least 93% or higher (≥ 95% if associated pulmonary hypertension present).
- Fluctuations in SPO2 on the tracing should occur for less than 4 % of the time of the pulse oximetry study

Following the overnight study, the oxygen level will be prescribed.

4.5 Subsequent pulse oximetry studies
A second pulse oximetry study will be required before discharge if supplemental oxygen therapy prescribed is different to that on which the initial pulse oximetry study was performed.

4.6 Additional investigations
In infants with CNLD, prior to discharge, an ECG and echocardiogram should be performed to assess the right heart in order to exclude significant pulmonary hypertension. The results of these investigations should be reviewed by Respiratory Specialist Paediatrician

It is not necessary regularly assess CO2 levels in the majority of infants with CNLD who are managed on oxygen therapy at home. However, this may be useful in some neonates with other conditions and this should be discussed with Respiratory Specialist Paediatrician.

4.7 For other conditions for oxygen therapy at home
Timing of pulse oximetry studies should be done dependant on infant’s condition and diagnosis.

5. Discharge Planning

5.1 Multidisciplinary discharge planning
A multidisciplinary discharge planning should be arranged to facilitate the discharge at least 2 weeks prior to discharge date. This meeting is led and arranged by the named senior nurse facilitating discharge of infant.
The date and venue arranged for meeting and the invitations to meeting should be sent out well in advance, that is at least 2 weeks prior to meeting.

The named senior nurse will chair this meeting which will include the following members of multidisciplinary team:

- The parents/carers of infant, the date set is set to suit the family.
- Respiratory Specialist Paediatrician. If possible meeting date to be discussed with Respiratory Specialist Paediatrician prior to invitations being sent out to facilitate specialist attendance.
- The child’s named neonatal consultant.
- Medical team in the neonatal unit to ensure attendance by senior doctor.
- GP
- Health Visitor
- Community Paediatric nurses
- Neonatal Continuing care / Family support team member
- Low dependency staff involved with Discharge planning of infant
- Physiotherapist if involved
- Speech and language specialist services if involved
- Play services from Children’s Development Centre if involved
- Social Care if involved.

5.2 Referrals

1. Community paediatric nurses team

Appropriate referrals to community paediatric nurses team and other multidisciplinary teams should be made as required (Appendix 7). This must be done on line and emailed to the team.

2. A Common Assessment Framework (CAF) may be considered with parental consent if more than one agency involved with infant to ultimately arrange ‘team around child meeting’ to coordinate the long term needs of the infant and family once infant at home. (Component of ‘Every Child Matters’ within the Children Act 2004)

3. Any other relevant agency that may be involved with the infant at home.

6. Development of discharge plan at meeting
6.1 Agenda
Each attendee at meeting is given the opportunity to give their report about the infant and plans and their roles for infant post discharge as applicable. Medical staff may leave the meeting after they have given their report.

6.2 Discharge plan
Discussed with the parents and others at meeting. This plan should include:

- The plan for multidisciplinary follow-up to ensure a safe smooth transition into the community and to avoid unnecessary hospitalisations.
- Date of discharge to be set
- Resuscitation training to be arranged
- Training programme to be set up for family to ensure confidence of family in the use of equipment used for administration of Home oxygen.
- Date for home installation with agreed by family to facilitate ordering of oxygen.
- Family has all contact numbers listed and information for:
  1. Community paediatric team members.
  2. Emergency department and GP
  3. Continuing Care team
  4. What to do if infant is ill

- If possible a date should be set for hand over meeting between neonatal continuing care team, health visitor and community paediatric team approximately 4 weeks post discharge dependant on baby’s condition and needs.

7. Ordering and provision of oxygen (and other equipment)

a. The ordering of home oxygen ordering should be undertaken by nursing staff involved with discharge as prescribed by the paediatric / neonatal specialists.

b. Oxygen concentration should be provided for LTOT if the flow rate at discharge is > 1.0 LPM ( rare occurrence); for flow rates of < 1.0 LPM, the current oxygen provider for the region will only provide oxygen cylinders. .

c. While low flow oxygen cylinders are easier to handle, they empty more quickly. Parent choice should be considered

d. Portable equipment should be available for all infants as part of the provision of home oxygen unless oxygen is only required at night
e. Low flow metres are preferable. Therefore, very low flow meters are not recommended.

f. When oxygen is given via a tracheostomy, heated humidification is generally recommended although a heat-moisture exchanger with an oxygen attachment may be adequate alternative.

g. Nasal cannulae are preferable for infants for flows of <2 LPM.

h. There is no evidence on whether the routine use of a saturation monitor at home is of benefit or harm, and, therefore, it is not currently recommended. In order to make parents feel confident that continuous home saturation monitoring is not required in a stable state once a safe oxygen level is established, continuous monitoring should be discontinued in the unit for a minimum of 48 hours prior to discharge. Parents should be encouraged to room in pre-discharge.

### 7.1 Ordering of oxygen installation

- Patient agreement for sharing information as part of oxygen supply at home service to be discussed and signed by parents/carer. Please ensure that the parents/carers have a copy and a copy is filed in medical notes (Appendix 5)

- Order oxygen from supplier using Home oxygen order form (HOOF). The supplier for Nottinghamshire is Air Liquide. (Appendix 6). The order should be faxed to air products as per instructions on form.

- Please ensure that a copy of the HOOF is filed in the infant’s records.

### 8. Administration of Palivizumab (appendix 3)

Infants who are discharged between the months of October to March must be given the first dose of Palivizumab prior to discharge. The details for the infant needs to be registered on the Bluteq electronic prescribing system. This will done by the Respiratory Registrar once the NNUCLD electronic referral has been completed. Subsequent doses and clinical review will be undertaken by the Respiratory team in outpatient follow up clinics.

### 9. Discharge

The infants will usually be ready for discharge home when:

- The oxygen requirement is stable with a mean SpO2 of >93% and without frequent episodes of desaturations or apnoea and this has been confirmed by an overnight pulse oximetry study. This usually corresponds with an oxygen flow <0.5l/min. Only under exceptional circumstances and after discussion with Respiratory paediatrician will an infant be discharged in a higher flow rate

- The SpO2 does not fall below 90% for more than 5% of the artefact-free recording period.
There are no other clinical conditions precluding the discharge and the infant is medically stable with no episode of apnoea or frequent desaturations for at least 2 weeks

All training for family to ensure confidence with their baby at home in oxygen is completed.

Oxygen is installed at home and the family are aware of how to use equipment at home

10. Follow up after discharge
a. All infants will be under follow up by a Neonatal Consultant

b. The neonatal continuing care nurse, or community children’s nurse should visit the infant at home on day of discharge to do oxygen check to ensure correct administration of oxygen by family and that they are confident in this.

c. Infants with CNLD should have their SpO2 monitored within 48hrs of discharge, with subsequent recordings as clinically indicated, (but should not be less often than 3-5 weekly; monitoring should include various activity states(28)). Monitoring at home will be done by the regular overnight oxygen studies performed by the community paediatric nurses. These nurses and Respiratory Specialist Paediatrician meet up regularly to review these overnight studies to monitor and wean home oxygen.

d. Neonatal continuing care follow up is at discretion of continuing care team until the family and their infant are well settled in the home environment and neonatal needs are met. These should include sustained growth and development of the infant with the family feeling confident in coping with their infant at home. Planned hand over of the infant to the community paediatric team and health visitor should be undertaken.

e. Infants with CNLD will be continued to be followed up until they no longer require oxygen by Respiratory Specialist Paediatrician and the community paediatric nursing team.

f. Infants who meet the JCVI criteria (Appendix 3), follow up doses of Palivizumab must be arranged by Respiratory Specialist Paediatrician and the team.

Appendices:
1. Long term oxygen therapy (LTOT) pathway for infant with chronic neonatal lung disease
2. CNLD Referral to paediatric respiratory Team (Dr J Bhatt)
3. Summary of JCVI criteria for Palivizumab injections.
4. Neonatal Home Oxygen Care Pathway for babies with chronic lung disease
Documents and leaflets used as part of this guideline:

1. Agenda for multi-disciplinary discharge planning meeting
2. Patient agreement to sharing information
3. Home oxygen order form (HOOF)
4. Parent teaching protocol for Home oxygen
5. Children’s Community Nursing Service Leaflet
6. Signs of Respiratory distress leaflet
Appendix 1
Long term oxygen therapy (LTOT) pathway for infant with chronic neonatal lung
disease (CNLD).

SpO2 measured by pulse oximetry:

Infant with chronic lung disease (post menstrual age >36 weeks)

Assess need for supplemental O2 to maintain target saturation of 93% and above

Exclude other treatable causes

Ensure fulfils all other discharge criteria

Arrange and facilitate multi disciplinary meeting and set discharge date

Educate parents/ carers and do pre discharge home visit

Order LTOT = ambulatory oxygen
(Concentrator with large cylinders back-up & portable cylinders)

Oxygen installed in home.

Check parents/carers understanding of equipment

Ensure community team & GP aware of discharge date

Infant discharged Home

Follow up by neonatal /paediatric nurses at home on day of discharge

Pulse oximetry at home by community paediatric nurses within 48hrs to a week of discharge and adjustments of O2 as required. Thereafter as required.

Continued assessments at home at discretion of neonatal continuing care team until growth and development sustained and planned hand over to community paediatric team and health visitor.
Appendix 2

Referral for babies with CLD of prematurity for home oxygen

Please use the Electronic referral form (Notis)

Maternal details:

<table>
<thead>
<tr>
<th>Does mum smoke?</th>
<th>Y / N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does dad smoke?</td>
<td>Y / N</td>
</tr>
<tr>
<td>Gestation: ______ /40</td>
<td>EDD: ____________</td>
</tr>
<tr>
<td>Birth Wt: ______ Kg</td>
<td>Current Wt ______ Kg</td>
</tr>
<tr>
<td>Ventilation: ________________ Days</td>
<td></td>
</tr>
<tr>
<td>CPAP: ________________ Days</td>
<td></td>
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<tr>
<td>Nasal Cannulae: __________ Days</td>
<td></td>
</tr>
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</table>

Problems:

1. 
2. 
3. 
4. 
5. 

Feeds: Feed related desaturations: Y / N

Apnoeas in the last 2 weeks: Y / N

Overnight Oximetry:

Date: ______________ Current Amount: ___________ Lpm

Most recent pCO2

PDA: Y / N

Treatment: Fluid restriction Indomethacin Surgery

Any evidence of pulmonary hypertension?

ECG: ECHO:

Current medications

1. Postnatal corticosteroids: Y or N
If Y: was it Dexamethasone / Hydrocortisone / Betamethasone / MethylPrednisolone / Other
If Y, Start Date: End Date:

Response:

2. Azithromycin: Y or N
   If Y, Start Date: End Date:

3. Hydroxychloroquin: Y or N
   If Y, Start Date: End Date:

4. Diuretics: Y or N
   If Y, Start Date: End Date:

5. Other treatment:

Other information: ROP / Hernia /co morbidities

Probable date of discharge: ________

No. of doses of Palivizumab:

BLS teaching for parents: Y /N Date:
Appendix 3:

The JCVI considers the use of Palivizumab as cost effective when used as recommended for pre-term infants with CLD (defined as oxygen dependency for at least 28 days from birth) at the chronological ages at the start of the RSV season and gestational ages at birth covered within the shaded area in Table 1. Please refer to any updates about these recommendations at the onset of RSV season.

<table>
<thead>
<tr>
<th>Chronological age (months)</th>
<th>Gestational age at birth (weeks)</th>
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<tbody>
<tr>
<td>1.0 to &lt;1.5</td>
<td>≤24</td>
</tr>
<tr>
<td></td>
<td>24-26</td>
</tr>
<tr>
<td></td>
<td>26-28</td>
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<td>28-30</td>
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<td>30-32</td>
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<td></td>
<td>32-34</td>
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<td></td>
<td>≥35</td>
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Table 1 – Cost effective use of Palivizumab (shaded area) for pre-term infants with CLD by chronological age (months) at the start of the RSV season (beginning of October) and gestational age at birth (weeks). The definition of CLD is oxygen dependency for at least 28 days from birth.

Reference: Joint Committee on Vaccination and Immunisation Statement on immunisation for Respiratory Syncytial Virus

Appendix 4

<table>
<thead>
<tr>
<th>Home Oxygen Care Pathway</th>
<th>Due</th>
<th>Nurse initial, date &amp; time</th>
</tr>
</thead>
</table>
| If baby still requires administration of oxygen via nasal cannula and is clinically well, the medical team to refer to Respiratory Paediatric Consultant and consider home oxygen. Discuss with family and give the appropriate information; leaflet on Home Oxygen. Refer to neonatal guideline: Infants From The Neonatal Service Going Home In Oxygen. The following criteria must be met for the baby to be considered ready to go home
  • No apnoeic episodes for at least 2 weeks
  • Without frequent episodes of desaturation
  • Stable O₂ requirement (SpO₂ ≥ 93%) in a constant flow rate
  • <5% of study time < 90%
  • Cope with short periods in air without being at risk of rapid deterioration (generally a flow rate of ≤ 0.5 LPM)
  • Medically stable with satisfactory growth
  • Training and education for parents + suitable home environment
  • SHS / ETS avoidance ; Travel and other practical advice (candles) | 35° weeks corrected gestation age (CGA) | 36 weeks CGA |
| Notify Neonatal Continuing Care team | 35° weeks CGA |
| Stop full cardiac monitoring and place nasal cannula oxygen dependant baby onto saturation monitor if condition allows. | At 36 weeks corrected |
| If Baby requires nasal cannula oxygen at ≥ 0.1litres oxygen per minute establish safe oxygen requirement: Continuous physiological monitoring of oxygen saturation: set lower limit at 94% and set upper limit as OFF, record all | 36 weeks CGA |
episodes of desaturations less than 94% and adjust level of oxygen administered to baby accordingly until baby responds and is stable desaturations stabilise. Oxygen requirements set at a level agreed with medical staff. Overnight oxygen saturation trace (sleep study) to be done

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timing</th>
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<tbody>
<tr>
<td>Discuss with medical team to: request chest X-ray / ECG and echo (refer to neonatal guideline); consider cardiac echo, which can be arranged as an outpatient appointment.</td>
<td>At 36 weeks CGA</td>
</tr>
<tr>
<td>Check with family that home is ready for baby to be discharged?</td>
<td>When multidisciplinary team agree that baby will go home in oxygen</td>
</tr>
<tr>
<td>If baby requires nasal cannula oxygen of &lt; 0.1 litres per minute continue to wean off oxygen until baby is 38 CGA.</td>
<td>At 36 weeks CGA</td>
</tr>
<tr>
<td>If baby requires nasal cannula oxygen of ≥ 0.1 litres per minute and baby still in oxygen, request overnight oxygen saturation trace (Sleep Study) to be in appropriate nasal cannula O2 with an aim to maintain O2 saturations ≥ 93%. Please record Baby’s weight on the day of the sleep study and forward this information to the Consultant Respiratory paediatrician along with the sleep study trace. Dependant on results of overnight oxygen saturation trace through consultation with respiratory paediatrician Consultant, oxygen levels prescribed via nasal cannula.</td>
<td>Agree with Paediatric Respiratory Consultant At 38 weeks CGA</td>
</tr>
<tr>
<td>If baby has outgrown the agreed oxygen requirement, an overnight saturation trace (Sleep Study) should be undertaken in air to ensure that the agreed target for oxygen saturation is met. If not met, it is good practice to organise and discharge baby home in oxygen. When results of the overnight oxygen saturation trace (Sleep Study) are available (along with current weight), discuss with the Paediatric Respiratory Consultant who will decide on the oxygen level required, and prescribe the oxygen levels required via nasal cannula.</td>
<td>38 weeks CGA</td>
</tr>
<tr>
<td>Decision made to discharge baby home in oxygen</td>
<td>Paediatric Respiratory Consultant decision</td>
</tr>
<tr>
<td>Arrange and hold a discharge planning meeting. Invite all members of multidisciplinary team to attend.</td>
<td>2 weeks prior to discharge date. Date completed:</td>
</tr>
<tr>
<td>A second overnight saturation trace to be done, if applicable.</td>
<td>After baby maintained at static level of oxygen Date completed:</td>
</tr>
<tr>
<td>Referral to Children's Community Nurse. This is done on line. Form is on intranet and e-mail referral to team.</td>
<td>2 weeks prior to discharge. Date completed:</td>
</tr>
<tr>
<td>Please discuss this with the Consultant Respiratory paediatrician. If Palivizumab is indicated, the Respiratory</td>
<td>Prior to discharge Date administered:</td>
</tr>
</tbody>
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team will arrange for the bay to be registered on Blueteq. The neonatal team should then prescribe Palivizumab and the first dose must be administered prior to discharge. The Respiratory team will arrange for clinic CLD review and further doses of Palivizumab in outpatients

**Applicable October to March only.**

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
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<tbody>
<tr>
<td>Order prescribed medicines to take home including Duoderm and Appeal wipes.</td>
<td>1 week Prior to discharge</td>
</tr>
<tr>
<td>Resuscitation training: explains the signs of respiratory distress. Give family relevant leaflet on respiratory distress, if appropriate.</td>
<td>1 week prior to discharge / 48 hrs prior to transitional are.</td>
</tr>
<tr>
<td>Stop monitoring oxygen dependant baby in preparation for home</td>
<td>48 hrs after stabilising oxygen requirement and baby stable</td>
</tr>
<tr>
<td>Ensure family is able to and confident to administer oxygen, change nasal cannula and re-order oxygen supplies at home.</td>
<td>Prior to discharge</td>
</tr>
<tr>
<td>Complete HOOF (home oxygen order form) and order oxygen via Fax from Oxygen Supplier for installation at patients home.</td>
<td>Refer to Guidance Date ordered:</td>
</tr>
<tr>
<td>Discuss with parents a date that is suitable for oxygen installation and set a date for installation. Discuss with parents / carers the ‘Agreement to share information form’ and ensure parents / carers read and sign.</td>
<td>When oxygen levels for home have been established by from Respiratory Paediatric Consultant</td>
</tr>
<tr>
<td>Discuss and arrange transitional care or rooming in for family and baby to facilitate safe and confident discharge</td>
<td>1 - 3 days before discharge</td>
</tr>
<tr>
<td><strong>NOTIFY CONTINUING CARE TEAM:</strong> Ensure <strong>timely discharge of baby before lunchtime</strong> to facilitate the <strong>home oxygen check visit</strong> by the Continuing Care Team on the day of discharge.</td>
<td>Lunchtime on day of discharge</td>
</tr>
</tbody>
</table>
References