NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Specialist neonatal respiratory care for babies born preterm

NICE quality standard

Draft for consultation

14 October 2019

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| **This quality standard covers** neonatal respiratory support in hospital for babies born preterm (before 37 weeks of pregnancy). It describes high-quality care in priority areas for improvement.  **It is for** commissioners, service providers, healthcare professionals and the public, including parents and carers.  This is the draft quality standard for consultation (from 14 October to 11 November 2019). The final quality standard is expected to publish in March 2020. |

# Quality statements

[Statement 1](#_Quality_statement_1:) Preterm babies having respiratory support soon after birth and before admission to the neonatal unit, are given continuous positive airways pressure (CPAP) rather than invasive ventilation if clinically appropriate.

[Statement 2](#_Quality_statement_2:_1) Preterm babies who need surfactant are given it using a minimally invasive technique if they do not need invasive ventilation.

[Statement 3](#_Quality_statement_3:) Preterm babies having invasive ventilation are given volume-targeted ventilation (VTV) in combination with synchronised ventilation.

[Statement 4](#_Quality_statement_4:) Preterm babies have a target oxygen saturation of 91% to 95% after stabilisation.

[Statement 5](#_Quality_statement_5:) Parents or carers of preterm babies who are having respiratory support are helped to care for their baby.

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| Other quality standards that should be considered when commissioning or providing services in specialist neonatal respiratory care for babies born preterm include:   * [Developmental follow-up of children and young people born preterm](https://www.nice.org.uk/guidance/qs169) (2018) NICE quality standard 169 * [End of life care for infants, children and young people](https://www.nice.org.uk/guidance/qs160) (2017) NICE quality standard 160 * [Preterm labour and birth](https://www.nice.org.uk/guidance/qs135) (2016, updated 2019) NICE quality standard 135 * [Intravenous fluid therapy in children and young people in hospital](https://www.nice.org.uk/guidance/qs131) (2016) NICE quality standard 131 * [Neonatal infection](https://www.nice.org.uk/guidance/qs75) (2014) NICE quality standard 75 * [Jaundice in newborn babies under 28 days](https://www.nice.org.uk/guidance/qs57) (2014) NICE quality standard 57 * [Neonatal specialist care](https://www.nice.org.uk/guidance/qs4) (2010) NICE quality standard 4   A full list of NICE quality standards is available from the [quality standards topic library](http://www.nice.org.uk/Standards-and-Indicators/Developing-NICE-quality-standards-/Quality-standards-topic-library). |
| Questions for consultationQuestions about the quality standard **Question 1** Does this draft quality standard accurately reflect the key areas for quality improvement?  **Question 2** Are local systems and structures in place to collect data for the proposed quality measures? If not, how feasible would it be for these to be put in place?  **Question 3** Do you think each of the statements in this draft quality standard would be achievable by local services given the net resources needed to deliver them? Please describe any resource requirements that you think would be necessary for any statement. Please describe any potential cost savings or opportunities for disinvestment. Local practice case studies **Question 4** Do you have an example from practice of implementing the NICE guideline that underpins this quality standard? If so, please provide details on the comments form. |

# Quality statement 1: Respiratory support soon after birth

## Quality statement

Preterm babies having respiratory support soon after birth and before admission to the neonatal unit, are given continuous positive airways pressure (CPAP) rather than invasive ventilation if clinically appropriate.

## Rationale

Using CPAP, when clinically appropriate, to stabilise preterm babies reduces the use of unnecessary invasive ventilation. Using CPAP instead for preterm babies can reduce mortality before discharge and the incidence of bronchopulmonary dysplasia (BPD) in babies under 36 weeks.

## Quality measures

### Structure

a) Evidence of local arrangements and written clinical protocols to ensure that preterm babies having respiratory support soon after birth and before admission to the neonatal unit, are given CPAP where clinically appropriate.

***Data source:*** Local data collection, for example, audits of stabilisation protocols.

b) Evidence of the availability of training in the use of neonatal CPAP.

***Data source:*** Local data collection, for example, provision of training courses in neonatal CPAP.

### Process

Proportion of preterm babies who had respiratory support before admission to the neonatal unit, who were given CPAP where clinically appropriate.

Numerator – the number in the denominator who were given CPAP where clinically appropriate.

Denominator – the number of preterm babies who had respiratory support before admission to the neonatal unit.

***Data source:*** Local data collection, for example, local audit of patient records.

### Outcome

Proportion of babies with BPD at 36 weeks' postmenstrual age.

Numerator – the number in the denominator with BPD.

Denominator – the number of babies at 36 weeks’ postmenstrual age.

***Data source:***Local data collection, for example, audits of patient records. The [National Neonatal Audit Programme (NNAP)](https://nnap.rcpch.ac.uk/default.aspx) measures the number of babies with BPD.

## What the quality statement means for different audiences

**Service providers** (such as maternity and delivery units, and neonatal units, including special care units, local neonatal units and neonatal intensive care units) ensure that systems are in place for preterm babies to be given CPAP, when it is clinically appropriate, if they need respiratory support soon after birth. They ensure that healthcare professionals are trained to provide CPAP and identify when invasive ventilation is clinically necessary.

**Healthcare professionals** (such as midwives, specialist neonatal nurses, specialist neonatal consultants and other paediatric specialists working with babies born preterm) ensure that they use CPAP for preterm babies who need respiratory support soon after birth, if clinically appropriate. They are trained to administer CPAP and to identify when invasive ventilation is clinically needed and provide this if necessary.

**Commissioners** (such as clinical commissioning groups and NHS England) ensure that the services they commission use CPAP for preterm babies who need respiratory support soon after birth, if clinically appropriate.

**Preterm babies who need help with their breathing soon after birth** are given continuous positive airways pressure if it is suitable for them. This is when air is given through a mask or through tubes into the nose to support breathing. It is preferable to using a ventilator which has a higher risk of other problems.

## Source guidance

[Specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124) (2019) NICE guideline NG124, recommendation 1.2.1

## Definitions of terms used in this quality statement

### Bronchopulmonary dysplasia (BPD)

The most frequent adverse outcome for babies born at less than 30 weeks’ gestation and the most common chronic lung disease in infancy. BPD is responsible for prolonged hospitalisation and readmissions after discharge, and can have a significant impact on quality of life for both the child and family. BPD is associated with significant healthcare costs. [NICE’s guideline on [specialist neonatal respiratory care for babies born preterm](https://www.nice.org.uk/guidance/ng124), evidence review A: diagnosing respiratory disorders]

### Clinically appropriate

It would not, or is unlikely to, be clinically appropriate to use CPAP in the following circumstances:

* for babies who are not breathing and need invasive ventilation
* for preterm babies born very early, for example at less than 25 weeks’ gestation, for whom invasive ventilation may be more appropriate.

Clinical judgement should be used to decide whether invasive ventilation with surfactant is more appropriate in the delivery room for babies born very early. Very early preterm babies may not have the necessary respiratory drive for CPAP to be effective, and the failure rate of non-invasive ventilation is high for these babies.

[NICE’s guideline on [specialist neonatal respiratory care for babies born preterm](https://www.nice.org.uk/guidance/ng124), rationale and impact information for recommendation 1.2.1]

# Quality statement 2: Minimally invasive administration of surfactant

## Quality statement

Preterm babies who need surfactant are given it using a minimally invasive technique if they do not need invasive ventilation.

## Rationale

Surfactant can be given to preterm babies using a minimally invasive technique if they are not on invasive ventilation. Using a minimally invasive technique reduces the risk of bronchopulmonary dysplasia (BPD) and pneumothorax (collapsed lung), and the number of days on invasive ventilation.

## Quality measures

### Structure

a) Evidence of local arrangements and written clinical protocols to ensure that preterm babies who do not need invasive ventilation receive surfactant using a minimally invasive technique.

***Data source:*** Local data collection, for example, clinical protocols on surfactant administration and clinical governance oversight.

b) Evidence of staff training in a minimally invasive surfactant administration technique.

***Data source:*** Local data collection, for example, the number of staff trained in a minimally invasive surfactant administration technique.

### Process

Proportion of preterm babies who need surfactant and do not need invasive ventilation who are given surfactant using a minimally invasive technique.

Numerator – the number in the denominator who receive surfactant using a minimally invasive technique.

Denominator – the number of preterm babies who need surfactant and do not need invasive ventilation.

***Data source:*** Local data collection, for example, local audit of patient records.

### Outcome

a) Incidence of pneumothorax in preterm babies.

***Data source:***Local data collection, for example, audits of patient records.

b) Proportion of babies with BPD at 36 weeks' postmenstrual age.

Numerator – the number in the denominator with BPD.

Denominator – the number of babies at 36 weeks’ postmenstrual age.

***Data source:***Local data collection, for example, audits of patient records. The [National Neonatal Audit Programme (NNAP)](https://nnap.rcpch.ac.uk/default.aspx) measures the number of babies with BPD.

## What the quality statement means for different audiences

**Service providers** (such as neonatal units, including special care units, local neonatal units and neonatal intensive care units) ensure that processes are in place and healthcare professionals are trained to administer surfactant using a minimally invasive technique to preterm babies who do not need invasive ventilation.

**Healthcare professionals** (such as specialist neonatal nurses, specialist neonatal consultants and other paediatric specialists working with babies born preterm) ensure that they do not intubate preterm babies who do not need invasive ventilation to administer surfactant. They use a minimally invasive technique to administer surfactant to these babies.

**Commissioners** (such as clinical commissioning groups and NHS England) ensure that they commission services that use minimally invasive techniques to administer surfactant to preterm babies who do not need invasive ventilation.

**Preterm babies who need surfactant to help them breathe** are given it in a way that has a low risk of problems. This is done through a thin tube into the baby’s nose or mouth and passed into their airway. If the baby needs help with breathing using a ventilation machine with a tube that passes into the windpipe, surfactant is given through the tube that is already in place.

## Source guidance

[Specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124) (2019) NICE guideline NG124, recommendation 1.2.3

## Definitions of terms used in this quality statement

### Minimally invasive technique

Administration of surfactant through a thin endotracheal catheter without insertion of an endotracheal tube or invasive ventilation. [NICE’s guideline on [specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124), terms used in this guideline section]

# Quality statement 3: Invasive ventilation

## Quality statement

Preterm babies having invasive ventilation are given volume-targeted ventilation (VTV) in combination with synchronised ventilation.

## Rationale

VTV in combination with synchronised ventilation has a lower mortality rate before discharge in preterm babies. It reduces the risk of bronchopulmonary dysplasia (BPD) and pneumothorax (collapsed lung), and the number of days on invasive ventilation.

## Quality measures

### Structure

a) Evidence of local arrangements and written clinical protocols to ensure that preterm babies having invasive ventilation are given VTV in combination with synchronised ventilation.

***Data source:*** Local data collection, for example, audits of clinical protocols.

b) Evidence of local arrangements to ensure availability of flow sensors for VTV on neonatal units.

***Data source:*** Local data collection, for example, records of purchase orders and audits of flow sensors for VTV on neonatal units.

### Process

Proportion of preterm babies having invasive ventilation who were given VTV in combination with synchronised ventilation.

Numerator – the number in the denominator who were given VTV in combination with synchronised ventilation.

Denominator – the number of preterm babies having invasive ventilation.

***Data source:*** Local data collection, for example, audits of patient records.

### Outcome

a) Number of days preterm babies spend on invasive ventilation.

***Data source:***Local data collection, for example, audits of patient records.

b) Incidence of pneumothorax in preterm babies.

***Data source:***Local data collection, for example, audits of patient records.

c) Proportion of babies with BPD at 36 weeks' postmenstrual age.

Numerator – the number in the denominator with BPD.

Denominator – the number of babies at 36 weeks’ postmenstrual age.

***Data source:***Local data collection, for example, audits of patient records. The [National Neonatal Audit Programme (NNAP)](https://nnap.rcpch.ac.uk/default.aspx) measures the number of babies with BPD.

## What the quality statement means for different audiences

**Service providers** (such as neonatal units, including special care units, local neonatal units and neonatal intensive care units) ensure that systems are in place for preterm babies to be given VTV with synchronised ventilation if they are having invasive ventilation. They ensure that the flow sensors needed for VTV are available. Most units have flow sensors for triggered ventilation and the same sensor can be used for VTV.

**Healthcare professionals** (such as specialist neonatal nurses, specialist neonatal consultants and other paediatric specialists working with babies born preterm) ensure that they use VTV with synchronised ventilation for preterm babies who are having invasive ventilation.

**Commissioners** (such as clinical commissioning groups and NHS England) ensure that the services they commission provide VTV with synchronised ventilation to preterm babies having invasive ventilation. The services they commission ensure that the flow sensors needed for VTV are available.

**Preterm babies who need help with breathing using a ventilation machine with a tube that passes into the windpipe** are given a type of ventilation that lets healthcare professionals control and maintain the amount of air the baby receives. This may reduce the risk of other problems and the number of days they need to spend in hospital.

## Source guidance

[Specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124) (2019) NICE guideline NG124, recommendation 1.2.7

## Definitions of terms used in this quality statement

### Invasive ventilation

Administration of respiratory support via an endotracheal tube or tracheostomy, using a mechanical ventilator. [NICE’s guideline on [specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124), terms used in this guideline section]

# Quality statement 4: Oxygen saturation

## Quality statement

Preterm babies have a target oxygen saturation of 91% to 95% after stabilisation.

## Rationale

Maintaining an oxygen saturation level of between 91% and 95% can reduce mortality, particularly in babies born very preterm. A saturation level much lower than 91% increases the risk of mortality and morbidity.

## Quality measures

### Structure

Evidence of local arrangements and written clinical protocols to ensure that preterm babies have a target oxygen saturation of 91% to 95% after stabilisation.

***Data source:*** Local data collection, for example, audits of oxygen administration protocols.

### Process

Proportion of preterm babies who have a target oxygen saturation between 91% and 95% after stabilisation.

Numerator – the number in the denominator who have a target oxygen saturation between 91% and 95%.

Denominator – the number of preterm babies after stabilisation.

***Data source:*** Local data collection, for example, audits of patient records.

### Outcome

Mortality rates in preterm babies.

***Data source:***Local data collection, for example, audits of neonatal mortality rates. The [National Neonatal Audit Programme (NNAP)](https://nnap.rcpch.ac.uk/default.aspx) collects data on mortality in preterm babies, which will be published according to local neonatal network from 2020.

## What the quality statement means for different audiences

**Service providers** (such as neonatal units, including special care units, local neonatal units and neonatal intensive care units) ensure that systems are in place for preterm babies to have a target saturation level of 91% to 95%. They ensure that healthcare professionals are aware of this target.

**Healthcare professionals** (such as specialist neonatal nurses, specialist neonatal consultants and other paediatric specialists working with babies born preterm) ensure that oxygen saturation targets for preterm babies are between 91% and 95%. They monitor this using continuous pulse oximetry, supplemented by arterial sampling if clinically indicated.

**Commissioners** (such as clinical commissioning groups and NHS England) ensure that they commission services that specify target oxygen saturation levels of 91% to 95% in preterm babies.

**Preterm babies** have the amount of oxygen in their blood (oxygen saturation) monitored and kept at a safe level (between 91% and 95%).

## Source guidance

[Specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124) (2019) NICE guideline NG124, recommendation 1.4.2

## Definitions of terms used in this quality statement

### Stabilisation

Facilitating and supporting a smooth transition from fetal to neonatal life. The process involves careful assessment of heart rate, colour (oxygenation) and breathing, with provision of appropriate interventions where indicated. [NICE’s guideline on [specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124), terms used in this guideline section.]

# Quality statement 5: Parental involvement

## Quality statement

Parents or carers of preterm babies who are having respiratory support are helped to care for their baby.

## Rationale

Involving parents or carers in planning and delivering day-to-day care for their preterm baby while in hospital, for example feeding and nappy changing, can help to support attachment, improve parental confidence and reduce maternal mental health conditions. If parents or carers are confident to manage their baby’s condition on discharge and able to use specialist equipment safely at home, their baby may be able to come home earlier. Poor psychological health can affect bonding between parents and carers and their baby, so access to psychological support can be beneficial.

## Quality measures

### Structure

a) Evidence of local arrangements to ensure that parents or carers of preterm babies having respiratory support are involved in discussions and decisions about their baby during ward rounds.

***Data source:*** Local data collection, for example, protocols to involve parents and carers during ward rounds. The [National Neonatal Audit Programme (NNAP)](https://nnap.rcpch.ac.uk/default.aspx) measures the proportion of admissions where parents were present on a consultant ward round on at least 1 occasion during their baby’s stay.

b) Evidence of local arrangements to ensure that parents or carers of preterm babies having respiratory support have 24 hour access to their baby.

***Data source:*** Local data collection, for example, protocols on parental or carer access to their preterm baby while in a neonatal unit.

c) Evidence of local arrangements to ensure parents or carers of preterm babies having respiratory support are involved in their baby’s day-to-day care and are able to use specialist equipment on discharge.

***Data source:*** Local data collection, for example, protocols to involve parents or carers of preterm babies having respiratory support in their baby’s care.

d) Evidence of local arrangements to ensure parents or carers of preterm babies having respiratory support are offered psychological support while their preterm baby is on respiratory support.

***Data source:*** Local data collection, for example, availability of professionals trained to deliver psychological support to parents or carers of preterm babies.

### Process

a) Proportion of parents or carers of preterm babies who are having respiratory support who are involved in discussions and decisions about their baby during ward rounds.

Numerator – the number in the denominator who are involved in discussions and decisions about their baby during ward rounds.

Denominator – the number of parents or carers of preterm babies who are having respiratory support.

***Data source:*** Local data collection, for example, audits of patient records of the frequency that parents or carers participated in ward rounds during their baby’s admission.

b) Proportion of parents or carers of preterm babies who are having respiratory support who have 24-hour access to their baby.

Numerator – the number in the denominator who have 24-hour access to their baby.

Denominator – the number of parents or carers of preterm babies who are having respiratory support.

***Data source:*** Local data collection, for example, audits of patient records of the frequency that parents or carers participated in ward rounds during their baby’s admission.

c) Proportion of parents or carers of preterm babies who are having respiratory support who are involved in providing their baby's day-to-day care.

Numerator – the number in the denominator who are involved in providing their baby's day-to-day care.

Denominator – the number of parents or carers of preterm babies who are having respiratory support.

***Data source:*** Local data collection, for example, audits of patient records.

d) Proportion of parents or carers of preterm babies who are having respiratory support who receive training to use specialist equipment before their baby is discharged.

Numerator – the number in the denominator who receive training to use specialist equipment before their baby is discharged.

Denominator – the number of parents or carers of preterm babies who will be having respiratory support following discharge.

***Data source:*** Local data collection, for example, audits of patient records.

e) Proportion of parents or carers of preterm babies on respiratory support who have access to psychological support while their baby is on the neonatal unit.

Numerator – the number in the denominator who have access to psychological support.

Denominator – the number of parents or carers of preterm babies on respiratory support on the neonatal unit.

***Data source:*** Local data collection, for example, audits of patient records.

### Outcome

Proportion of parents or carers who feel confident to care for their preterm baby at home.

Numerator – the number in the denominator who feel confident to care for their preterm baby at home.

Denominator – the number of parents or carers of preterm babies who have received respiratory support.

***Data source:***Local data collection, for example, surveys of parents’ and carers’ experience.

## What the quality statement means for different audiences

**Service providers** (such as neonatal units, including special care units, local neonatal units and neonatal intensive care units) ensure that systems are in place for parents or carers to be supported to be involved in their baby’s care. This can be through participation in ward rounds, providing day-to-day care and, if their baby is being discharged on respiratory support, understanding how to use specialist equipment at home. They also ensure that parents or carers have access to their baby 24 hours a day and that psychological support is available whilst their baby is on the unit.

**Healthcare professionals** (such as specialist neonatal nurses, specialist neonatal consultants and other paediatric specialists working with babies born preterm) engage with parents or carers to ensure they are provided with all the necessary information to help them understand their baby’s condition and management and to make informed decisions about their baby’s care. This includes providing support and guidance for parents or carers, making them aware of psychological support that is available, providing constructive and supportive feedback about how to care for their baby and, if their baby is being discharged on respiratory support, support to use specialist equipment at home.

**Commissioners** (such as clinical commissioning groups and NHS England) ensure that they commission services that help parents or carers to be involved in their baby’s care.

**Parents or carers of preterm babies having help with their breathing in hospital** are helped by their healthcare professionals to care for their baby. They have access to their baby 24 hours a day and are involved in ward rounds and in the planning of their baby’s care. They are helped to be confident to provide their baby’s day-to-day care, for example feeding and nappy changing and, if their baby is being discharged on respiratory support, are supported to use specialist equipment at home. They are also made aware of the psychological support that is available to them.

## Source guidance

[Specialist neonatal respiratory care in babies born preterm](https://www.nice.org.uk/guidance/ng124) (2019) NICE guideline NG124, recommendations 1.6.5, 1.6.7 and 1.6.8.

## Definitions of terms used in this quality statement

### Help to care for their baby

Parents or carers are involved in planning and providing their baby’s day-to-day care, for example, feeding and nappy changing. They are encouraged and supported to participate in discussions and decisions about their baby during ward rounds, providing input into planning care. They are given constructive and supportive feedback about how to care for their baby and, if their baby is being discharged on respiratory support, how to use specialist equipment at home. [NICE’s guideline on [Specialist neonatal respiratory care for babies born preterm](https://www.nice.org.uk/guidance/ng124), recommendations 1.6.5 and 1.7.4 and expert opinion]

## Equality and diversity considerations

Parents or carers should have access to an interpreter or advocate if needed.

Parents who are very young or parents who have special educational needs my need additional support when their baby is being cared for. Healthcare professionals should discuss any additional support they need with them, for example involving other members of their family or their social and support workers.

It may be difficult for some parents or carers to visit every day and be involved in their baby’s care because of the costs of travelling to the unit, accommodation nearby if needed and subsistence. These parents or carers should be advised of any support available to them on admission to the neonatal unit, including the availability of accommodation and support with subsistence costs. This may be available directly through the neonatal unit or through charities. Healthcare professionals should continue to involve them in their baby’s care as much as possible.

# About this quality standard

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. NICE quality standards draw on existing NICE or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, this may not always be appropriate in practice. Taking account of safety, shared decision-making, choice and professional judgement, desired levels of achievement should be defined locally.

Information about [how NICE quality standards are developed](https://www.nice.org.uk/standards-and-indicators/timeline-developing-quality-standards) is available from the NICE website.

See [quality standard advisory committees](http://www.nice.org.uk/Get-Involved/Meetings-in-public/Quality-Standards-Advisory-Committee) on the website for details of standing committee 3 members who advised on this quality standard. Information about the topic experts invited to join the standing members is available on the [quality standard’s webpage](https://www.nice.org.uk/guidance/indevelopment/gid-qs10137).

This quality standard has been included in the NICE Pathway on [specialist neonatal respiratory care in preterm babies](https://pathways.nice.org.uk/pathways/specialist-neonatal-respiratory-care-in-preterm-babies), which brings together everything we have said on a topic in an interactive flowchart.

NICE has produced a [quality standard service improvement template](https://www.nice.org.uk/guidance/indevelopment/gid-qs10137) to help providers make an initial assessment of their service compared with a selection of quality statements. This tool is updated monthly to include new quality standards.

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

## Improving outcomes

This quality standard is expected to contribute to improvements in the following outcomes in preterm babies:

* incidence of bronchopulmonary dysplasia (BPD)
* mortality rates
* morbidity rates
* parents or carers of preterm babies’ satisfaction with neonatal care.

It is also expected to support delivery of the Department of Health and Social Care outcome frameworks:

* [Adult social care outcomes framework](https://digital.nhs.uk/data-and-information/publications/ci-hub/social-care)
* [NHS outcomes framework](https://digital.nhs.uk/data-and-information/publications/clinical-indicators/nhs-outcomes-framework)
* [Public health outcomes framework for England](https://www.gov.uk/government/collections/public-health-outcomes-framework).

## Resource impact

NICE quality standards should be achievable by local services. The potential resource impact is considered by the quality standards advisory committee, drawing on resource impact work for the source guidance. Organisations are encouraged to use the [resource impact products](https://www.nice.org.uk/guidance/ng124/resources) for the source guidance to help estimate local costs.

## Diversity, equality and language

During the development of this quality standard, equality issues were considered and [equality assessments](https://www.nice.org.uk/guidance/indevelopment/gid-qs10137) are available. Any specific issues identified during development of the quality statements are highlighted in each statement.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

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