

Critical Care Programme
Weaning and long term ventilation
Executive Summary



1.0 Background

- 1.1 In 1999 the Department of Health established a review of adult critical care services. The multiprofessional group of experts assembled to carry out the review and to develop a framework for the future organisation and delivery of critical care services completed their work in 2000. The report of the group, entitled Comprehensive Critical Care, was published in May 2000. It outlines a far-reaching modernisation programme to develop consistent and inclusive critical care services in England.
- 1.2 The programme is a whole system approach that takes responsibility for the needs of those at risk of critical illness. It describes a new specialty that is patient focused and based on the severity of illness of each patient.
- 1.3 The service is to be delivered to uniform standards regardless of the location and specialty, with staff numbers, skills and expertise reflecting the complexity generated by the condition of individual patients.

2.0 Implementation of 'Comprehensive Critical Care'

- 2.1 The NHS Modernisation Agency, Critical Care Programme was established to facilitate the implementation of the recommendations in Comprehensive Critical Care.
- 2.2 The Critical Care Programme is using established collaborative methodology with the ultimate goal of improving access, experience and outcomes for patients with potential or actual need for critical care.
- 2.3 The Expert Group recognised that there were a number of clinical areas impacting upon the level of critical care provision that required additional evaluation. The following groups of patients were identified:
 - 2.3.1 Those patients requiring specialist weaning and progressive care for long term ventilation.
 - 2.3.2 Those patients in whom non-invasive ventilation (NIV) support may prove efficacious in averting progression of the disease process, or in supporting patients with specific types of respiratory insufficiency, thereby deviating their need for critical care.
 - 2.3.3 Those patients in whom chronic or terminal illness with little or no acute reversability might be afforded non-invasive ventilatory support to avoid the need for critical care.
- 2.4 The NHS Modernisation Agency, Critical Care Team assembled a multiprofessional working group to discuss the issue relating to current practice in these areas and the resources needed to deliver the service. The group was also asked to advise on perceived future needs and how these can be met.
 - 2.4.1 The working group documented the definitions and glossary of terms employed.
 - 2.4.1.1 Ventilatory dependence: The need for ventilatory support applied either invasively or non-invasively in order to prevent or treat respiratory failure.
 - 2.4.1.2 Weaning: The process of becoming independent from ventilatory support.

- 2.4.2 The working group carried out a comprehensive review of the literature relating to the care of these groups of patients.
- 2.4.3 The working group reviewed current practice relating to these patients and compared this with what they considered evidence based best practice.
- 2.4.4 The working group assessed the current demands on the service, the current capacity available to meet these demands and the resources currently available to deliver the service in terms of facilities, staffing levels, equipment and training. These assessments included a review of the results of a national survey commissioned by the group.

3.0 Acute respiratory failure and the use of NIV: Recommendations

We recommend that an NIV service be established in each acute Trust for the management of patients with acute respiratory failure on the basis that:

- 3.1 Non-invasive ventilation (NIV) reduces the need for the intubation, duration of ventilation and mortality in patients with acute exacerbation of COPD. This may lead to a reduction in ICU admissions.
- 3.2 Selected patients with non COPD acute respiratory failure (ARF).e.g. due to acute pneumonia, immunosuppression, post surgery, may benefit from NIV.
- 3.3 NIV reduces complication rates partly due to reduction in infectious consequences of intubation, e.g. nosocomial pneumonia.
- 3.4 NIV provides patient and their carers with access to an alternative form of ventilatory support that may be more suited to their individual needs.
- 3.5 Level 2 facilities provide a useful focus for training and delivering NIV.
- 3.6 The Committee recommends that such a service should be:
 - 3.6.1 Available continuously.
 - 3.6.2 Led by a suitably qualified team of consultant clinical staff, working to defined and accepted clinical protocols.
 - 3.6.3 Integrated with, and complementary to, the existing Level 2 and Level 3 facilities of the Trust.
 - 3.6.4 Supported by nursing and AHP staff appropriate to the dependency of the patients.
 - 3.6.5 Equipped to standards specified by the British Thoracic Society.
 - 3.6.6 A training facility for all junior medical, nursing and AHP staff involved in the care of the acutely ill.
 - 3.6.7 Equipped with data collection and audit facilities.

4.0 Delayed weaning: Recommendations

We recommend that a specialist NIV service to which patients who suffer delayed weaning can be referred should be established in a small number of NHS Trusts where there is appropriate experience on the basis that:

- 4.1 The service is of likely benefit to patients with delayed weaning.
- 4.2 The service is cost effective.
- 4.3 The Committee recommends that such a service should be:
 - 4.3.1 Available according to patient need.
 - 4.3.2 Integrated administratively within the Critical Care Network system where possible.
 - 4.3.3 Available as an outreach assessment and distant management service to Trusts within the defined catchment area.
 - 4.3.4 Led, staffed, organised and managed clinically according to standard protocols (which may need to be developed and validated).
 - 4.3.5 Equipped with data collection and audit facilities.

5.0 Failed weaning, long term ventilatory support and NIV: Recommendations

We recommend that a UK-wide service for the provision of long term invasive and non invasive support, and for patients who have failed weaning, should be established. This should be provided by specialist units experienced in the provision of long term and domiciliary ventilatory support. This is justified by:

- 5.1 The survival advantage seen in specified patient groups (e.g. chest and spinal deformity, neuromuscular disease) undergoing NIV.
- 5.2 A possible survival advantage and reduction in the need for hospitalisation in patients with stable ventilatory failure secondary to chronic lung disease.
- 5.3 The desirability of transferring patients who have failed weaning into the community.
- 5.4 The Committee recommends that such a service should be:
 - 5.4.1 Available according to patient need.
 - 5.4.2 Integrated administratively within the Critical Care Network system where possible.
 - 5.4.3 Available as an outreach assessment and distant management service to Trusts within the defined catchment area.
 - 5.4.4 Led, staffed, organised and managed clinically according to standard protocols (which may need to be developed and validated).
 - 5.4.5 Equipped with data collection and audit facilities.