30th Anniversary
1976 - 2006

NICE Technology Appraisal – nasal continuous positive airway pressure for the treatment of obstructive sleep apnoea and hypopnoea syndrome (OSAHS).

Submission of comments from

Association for Respiratory Technology & Physiology (ARTP)

What/who is ARTP?

The Association for Respiratory Technology & Physiology is the professional body that represents healthcare scientists who work in respiratory physiology and use its related technology and measurements in patients in the UK. ARTP has been established for over 30 years and has over 600 members, but access to probably 1000 members at 260 lung function and sleep departments in the UK where diagnosis and treatment of OSAHS takes place.

ARTP are registered as consultees for this NICE Technology Appraisal. ARTP members deliver sleep apnoea diagnostics and therapy (predominantly CPAP) in over 60% of lung function departments.

ARTP would like to comment by adding information to the debate on the clinical effectiveness, safety, and cost-effectiveness of continuous positive airway pressure (CPAP) devices for the treatment of obstructive sleep-apnoea-hypopnoea syndrome (OSAHS).

Why the NICE technology appraisal is important

Worldwide, there is considerable evidence of the importance of detecting and treating obstructive sleep apnoea with the SIGN (Scottish Intercollegiate Guidelines Network) published on OSA (2003); the Cochrane collaboration of nasal CPAP (2001) ; the Australian MRC review of nasal CPAP (2000) and the American Academy of Sleep Medicine (2006).

The overall conclusions from these surveys are that CPAP is an effective treatment for OSAHS. From recent ARTP and British Thoracic Society (BTS) surveys it is evident that provision of CPAP across the country varies from excellent to non-existent, and there is a perception that treatment of OSAHS can be classified as “postcode lottery”. There is therefore an urgent need for a NICE appraisal in order to guide purchasers and deliver a uniform service across the country.

How can the UK health services cope with an increased referral of patients for the investigation and treatment of OSA?

Given the estimated size of OSAHS in the UK population (Stradling & Crosby, 1991; Stradling & Davies, 2004), its association with obesity (Young et al, 2005) and the increasing rates of obesity it is evident that appropriate diagnostic and therapy services for all patients with OSAHS would have major cost implications and larger numbers of personnel trained in the area would be required.

Workforce in OSA services

Diagnostics for OSA (SIGN 2003) depend on the level of complexity required (from single channel, to multi-channel and up to polysomnography using "sleep staging") but healthcare scientists are by far the major group of health professionals trained and capable of delivering grass roots patient services. There are several healthcare scientist led OSAHS services in the UK that work extremely successfully and are cheaper to run than traditional physician-only referral routes.

A recent ARTP survey (www.artp.org.uk, 2005) of lung function departments has shown that the delivery of CPAP titration, trials, issue and long term support is delivered more commonly by non-medical staff. CPAP loan services are provided by 32% nurses 7% physios and **61% healthcare scientists**. Furthermore, CPAP Assessments/Trials/Titration is delivered by only 20% nurses, 1.4% physiotherapists, but **79% healthcare scientists**. Follow up and support of patients on CPAP is delivered by 25% nurses, 2.9% physiotherapists, 1.5% medics and **70% healthcare scientists**.

Healthcare scientists are becoming the experts in the diagnosis and treatment of OSAHS by doing the bulk of the work and are often better trained in the diagnostics and treatment than the respiratory Specialist Registrars (SpR). Indeed it is often healthcare scientists who now train SpRs in sleep physiology/medicine. This now creates a workforce opportunity for healthcare scientists to take a lead role in service delivery relieving physicians from delivering straight forward OSAHS and being able to focus on more complex patients (e.g. OSAHS/COPD, OSAHS/stroke, OSAHS/diabetes, OSAHS/CHD, etc.) The multi-disciplinary team approach can deliver a broad based, effective, seamless and safe service for patients.

Training for OSA

Training in OSA has been included in the educational programs of all respiratory healthcare scientists for some years, and most recent trainees would be quite able to contribute to services if adequately funded. There is a cohort of senior experienced healthcare scientists including several Consultant Clinical Scientists that are already providing such services.

More diagnostic staff could be made available through appropriate training courses organised by ARTP and other organisations (e.g. Bristol,

Stoke, Edinburgh, Brompton, Oxford, and Birmingham). Also, ARTP has contributed significantly to the BTS Sleep Apnoea Consortium by being instrumental in development of a course on OSAHS and producing extensive resource material to support it.

However, there is as yet no specialist B.Sc. module for healthcare scientists in this area, but ARTP has a M.Sc. module in sleep physiology to be launched by universities in September 2007 to produce high level practitioners of the future. This module can be accessed by any health professionals who require an academic qualification in sleep.

We must point out that the future OSAHS service cannot be delivered effectively unless more healthcare scientists are recruited and trained to diagnose and treat OSAHS. This would have a major impact on reducing the costs of delivering continuous positive airway pressure (CPAP) devices for the treatment of obstructive sleep-apnoea-hypopnoea syndrome (OSAHS). However, this should not compromise clinical effectiveness or safety provided adequate clinically agreed protocols, training and supervision are in place.

Paediatrics

Our members who work in paediatrics are disappointed that this technological appraisal of CPAP does not extend to paediatric patients who arguably experience greater health impacts with CPAP than many adults (Gislason T, Benediktsdottir, 1995).

Tariffs

We are unsure of whether costs are a key factor for the Technical Appraisal but we feel it is highly relevant and important to recognise the range of diagnostic services for sleep apnoea and the different tariffs that can be charged. Some centres recommend the use of (i) simple screening tests (overnight oximetry, nasal airflow) which are cheaper than (ii) multi-channel sleep studies , which are in turn much cheaper than (iii) full polysomnography studies. Estimated costs (and there is a wide variation nationally) would be screening studies (£75-£120); multi-channel studies (£400-£750) and polysomnography (£800-£1500). In the independent sector these costs can be much higher.

There is also a variety of CPAP diagnostic services provided which includes (a) CPAP titration studies (1 night on auto-titration device), (b) split night titration studies and (c) 2 week or 4 week titration trials. Each of these essentially diagnostic services requires different tariffs because of the different levels of workforce commitment, capital costs and consumables required. However, it is not possible to guess the variation and range of these tariffs.

Conclusion

ARTP broadly support the content of the NICE Assessment Report on CPAP with the provisos listed above. We would like NICE to consider these points in relation to adding information to the debate on the clinical effectiveness, safety, and cost-effectiveness of continuous positive airway pressure (CPAP) devices for the treatment of obstructive sleep-apnoea-hypopnoea syndrome (OSAHS).

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