ARTP SLEEP

S-News

Dreaming of a better night's sleep

Volume 2, Issue 2 Winter 2011

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ARTP SLEEP is a subsidiary of the Association for Respiratory Technology and Physiology

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Welcome

Welcome to the new-look autumn edition of SNEWS. With the long winter nights, some of us may wish to go into hibernation mode but unfortunately the increasing work load many are facing means there will be no sleeping on the job. And it is due to such a work load that I must apologise for the lateness of the publication of this issue, which was originally entitled Autumn 2011. In this edition we read about the lovely Anwen Evans and her interesting journey into the world of sleep medicine. We have the IMPRESS Oxford Sleep Unit CPAP audit and we also have an article from the British Lung Foundation and their OSA campaign, which could see a rise in referrals to our services. In response to the news about Ed Milliband's recent nose job we have an article on nasal surgery and OSA. ARTP Sleep would also like to wish all readers a Merry Christmas and prosperous New Year. Enjoy!

Sleep People - Anwen Evans Clinical Manager, Philips Respironics

"Vacancy for an overnight sitter to supervise sleep studies. Hours of work 22.00 – 06.00, one night a week. This is a temporary position to cover maternity leave. Please contact the department for further information or to request an application form."

That was in February 1988 and I remained at the University Hospital of North Staffordshire for 17 years before moving to the private sector in 2005. No, there is no entry in the Guinness Book of Records for the longest maternity leave recorded!

In 1976, I qualified as a therapeutic radiographer (radiotherapy) and worked at the Royal in Wolverhampton for about 10 years. 3 years and 2 moves later, I found myself in Newcastle-Under-Lyme, becoming increasingly bored with the process of house renovation and workmen! A chance purchase of the local newspaper resulted in the reading of the above vacancy.Knowing nothing about sleep studies, I duly contacted the department, registered my interest to find out more and one week later, on the 8th February 1988 started work knowing nothing. After an hour or so of hand holding from a day tech, I was left to supervise the rest of the study. I recall my poor attempt at explaining the procedure to a moderately amused, obese middle-aged man with poor sleep hygiene. "What time do you go to sleep?" I asked. He shot back with "I told you – I don't sleep." "Well don't worry, just lie still, try to sleep, and I'll be able to record important data." As I switched off the lights, I heard the first snores drone out. All night, every 30 minutes, I recorded observations "loud snores" and other values. At 6am, time to wake the patient. This was not an easy task, he weighed more than I did, had curled up into a ball and was unresponsive to my calling his name. After some shaking and removal of sensors, he woke and said "See, I told you that I never sleep." So my career in Sleep Medicine had begun!

It was most unsatisfactory to observe patient behaviour, acquire the data but leave the analysis and reporting to others. Wishing to complete the cycle from start to finish, within a month, the number of nights as well as daytime hours increased. No doubt those of you who know me well will appreciate the control element here!

Back then the sleep unit comprised one bedroom and an observation room.

Dates for your Diary

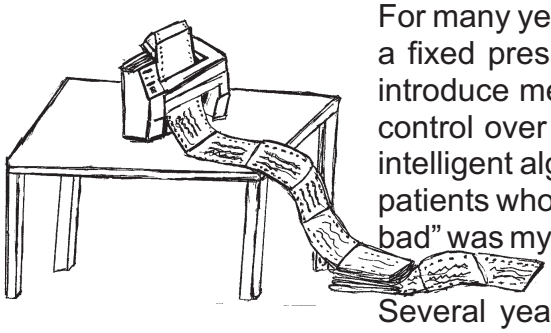
ARTP Annual Conference
26 - 28 January 2012
Barceló Hinckley Island Hotel, Hinckley, Leicestershire

Edinburgh Sleep Medicine Course
26-30 March 2012
John McIntyre Conference Centre, Edinburgh

APSS Sleep 2012
9-13 June 2012
Boston, USA

Fun and games was had in the observation room with the ink and toner bottles and the reams of paper which, if not careful, would spill out over the desk and floor.

Technology was simple with few sensors to apply (facial mask, oximeter probe and a couple of electrodes to record impedance). Fun and games was had in the observation room with the ink and toner bottles and the reams of paper which, if not careful, would spill out over the desk and floor. More than 1000 pages had to be visually analysed. Events such as apnoea and hypopnoea were scored using a ruler and pencil – each one and its type manually documented on a form and counted. Describing my observations was the cause of some hilarity at times as I drew on David Attenborough's descriptive terms when trying to convey the sound of snoring. I recall one as being "similar to the mating call of a whale" – (a high pitched whine). Although many may consider this archaic, fully supervising thousands of overnight studies, observing the relationship between patient behaviour and changes in parameters recorded, has undoubtedly provided me with invaluable knowledge and the confidence to argue with automated analysis!



CPAP titration was manual. It was my responsibility to evaluate what was happening, decide on what action to take and re-evaluate the effects of my action. For many years on the basis of the overnight manual titration, patients were set on a fixed pressure. Companies had a challenge on their hands when trying to introduce me to an auto titrating device. Once again, I insisted on having some control over the beast – the ability to intervene and over ride the device and its intelligent algorithm. To satisfy my scepticism, the auto device was tested on "old" patients who had been successfully treated with manually titrated pressures. "Not bad" was my evaluation of the auto followed by subsequent purchasing of units.

Several years later an extension was built to house 4 beds and allow for the introduction of full polysomnography. Acquiring the skills and knowledge to perform PSG was a challenge, the interpretation of the "wiggles" another and one which required untold hours of self study. Saturday or Sunday in an empty department, surrounded by books became a norm.

I was fortunate to secure funding to attend the Stanford School of Sleep Medicine for further training and what an experience! Sharon Keenan was the course director, a lady whose enthusiasm for the subject and its teaching made a lasting impression and influenced my career.

Forcing collodion through a blocked syringe resulted in the glue erupting forth, securing my eyelashes and a trip to A&E

PSG was not without its mishaps. Forcing collodion through a blocked syringe resulted in the glue erupting forth, securing my eyelashes together and a trip to A&E.

In December 2005, I, along with 12 other physiologists travelled to Edinburgh to sit the Board of Registered Polysomnographic Technologists exam – the first tranche from the UK to do so. As a registered polysomnographic technologist (RPSGT), I am required to either earn 50 credits for continuing education over a 5 year period or resit the exam in order to continue to hold my registration and qualification.

In addition to the clinical work, I also enjoy teaching and giving presentations (despite being shy and retiring of nature!). The Sleep and Ventilation unit at Stoke was known for its courses and study days. On one such course, Alexander McCall Smith, the now well known author, accepted my invitation to present on Sleep Medicine and the Law.

The ARTP has also played a big part in my career, inviting me to speak at conferences and to also represent them in the writing of National Occupational Standards (Sleep section). I recall the first invitation to speak at a plenary session

during its annual conference in Blackpool. Preparing the slides took weeks, if not months! I was still rearranging the sequence of slides at 2am on the morning of the plenary session. At the last minute, I decided to leave my notes behind and, for the first time, present "blind". Within hours of returning home, feeling unwell, I was diagnosed with pneumonia! I'm not certain that there is any connection here, and I don't intend to involve the ARTP in any litigation.

An early mid-life crisis found me making another career move, leaving the NHS and entering the private sector. In 2005, Respironics (now Philips Respironics) appointed me as their Clinical Manager for the UK. My role is varied, incorporating all the elements which I enjoy; clinical, teaching & education, service development to name but a few. Attending conferences, both national and international ensures continuing education and networking. I like the combination of being able to work from home as well as the opportunity for travel both within the UK and international.

23 years on, sleep medicine has evolved, technology has improved and I know a little more than I did when I first entered the sleep lab on 8th February 1988.

Sleep Facts

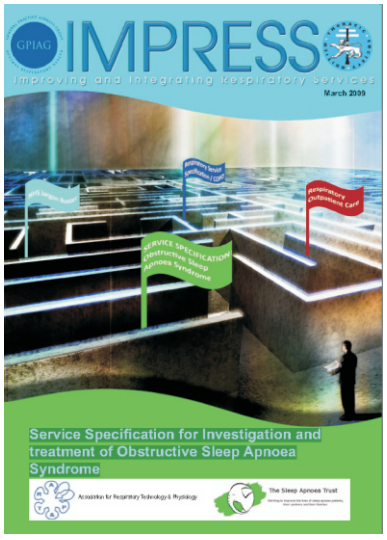
The record for the longest period without sleep is 18 days, 21 hours, 40 minutes during a rocking chair marathon. The record holder reported hallucinations, paranoia, blurred vision, slurred speech and memory and concentration lapses.

Anything less than five minutes to fall asleep at night means you're sleep deprived. The ideal is between 10 and 15 minutes, meaning you're still tired enough to sleep deeply, but not so exhausted you feel sleepy by day.

After five nights of partial sleep deprivation, three drinks will have the same effect on your body as six would when you've slept enough.

IMPRESS CPAP Audit - Oxford Sleep Unit

Professor John Stradling
Sister Debbie Smith



Introduction

These are the results of the Sleep Unit's audit of CPAP usage. A recent document[1] produced by the BTS (British Thoracic Society), SATA (patients association) and the ARTP (Association for Respiratory Technology and Physiology) suggested a simple way to try and compare the success of CPAP services across the country. This followed the publication by NICE of their HTA and CPAP.

IMPRESS suggested that if one defined a group of patients with severe and symptomatic OSA there ought to be a percentage that any unit should successfully establish on CPAP and keep on CPAP at one year.

Most patients not managing CPAP have usually stopped by then. Some patients who stop CPAP before a year may have done so because they have been

successfully treated with alternative therapies or perhaps have lost weight. However, to keep it simple the criteria to define severe patients was as follows:-

- Initial ESS > 12 (where upper limit of normal is considered to be about 9), highest score possible = 24
- Initial ODI >30, which is the conventional definition of severe sleep apnoea.

It was postulated that >90% of symptomatic patients with severe OSA should be safely established on long term CPAP with a compliance of >3 hours per night.

Since no one has ever calculated this metric before we do not know the levels expected of a 'good' unit but it was postulated that >90% of such patients should be safely established on long term CPAP with a compliance of >3 hours per night (the minimum considered therapeutically adequate, although some use >4 hours per night, there being no clear evidence for a specific threshold to define 'therapeutic' compliance).

Methods

To perform this audit we took a 6 month cohort of all patients started on CPAP between November 09 and June 10. We collected their baseline values of ODI and ESS, and tried to establish how many were still on CPAP at the one year anniversary of their start date. The amount of missing data was higher than hoped for, despite major efforts by staff to repeatedly try and contact these patients when there was no data in the notes. Some of these 'missing data' patients were happy with their progress and did not see the need to return to clinic, some were truly uncontactable due to address changes of which they had not informed us, and some had repeatedly had to cancel their OPD appointment and were due to come back at a future date. There were also a number of missing notes.

The baseline characteristics of the “stopped” group show a lower ODI than those remaining on CPAP

Results

- 342 patients were put on CPAP between Nov 09 and June 2010 inclusive.
- 38 patients admitted to stopping CPAP by 1 year
- 227 were established as still on CPAP at 1 year
- Follow up data are not available on 77 (see above)
- The baseline characteristics of the 'stopped' group show a lower ODI than those remaining on CPAP.
- The baseline characteristics of the 'missing data' group are similar to the group overall (ESS and ODI), and we have therefore assumed that they will probably be made up of a similar proportion of stopped/continuing CPAP users.

Total 342	**Stopped CPAP (38)**	**On CPAP (227)**	***No data (77)***
Initial ESS	13.9	13.9	*13.3*
Initial ODI (>4% dips/hour)	23.6	43.1	*35.4*
Severe OSAS (%)	6 (16%)	89 (39%)	*32 (41%)*
1 yr compliance (hours/night)	-	4.8	-
1yr ESS	-	6.6	-

- In the group with data as a whole, 66% were still on CPAP at one year.
- Of the 265 patients with 1yr data, 95 (36%) were in the severe range (ESS>12 and ODI>30)
- Of these 95, only 6 had stopped CPAP, and 17 of those who were still using CPAP had a compliance <3.
- 89/95 (94%) with OSAS in the severe range were still using CPAP to some degree.
- Thus 72/95 (76%) with OSAS in the severe range were on 'therapeutic' (>3 hours/night) CPAP.

Discussion

This study has shown that the Oxford sleep unit put 342 patients on CPAP (and therefore about 685 patients that year). Of the 265 with full data, 95 were classified as severe by the IMPRESS criteria, and 89 (94%) were still using CPAP to some extent at their 1 year follow up. This is an extremely gratifying figure and a considerable tribute to the nursing staff who do this work. However, only 72 (76%) were using it for >3 hrs per night, the cut-off to arbitrarily define 'therapeutic' CPAP usage.

ODI predicted CPAP usage, as would be predicted from previous research[2]. However, this correlation between initial ODI and compliance is unfortunately not strong enough to be very useful in guiding decisions about prescribing CPAP.

The degree of missing data is disappointing and we have initiated a way to collect baseline data on our CPAP management database, rather than relying on the availability of notes.

Future versions of this audit may need to take account of 'legitimate' non usage of CPAP at one year, such as weight loss, operations (particularly bariatric surgery), and other illnesses preventing CPAP use (hospital admissions to other

Sleep Quotes

"A well-spent day brings happy sleep."
Leonardo da Vinci

"Sleep is the best meditation."
Dalai Lama

"I love sleep. My life has the tendency to fall apart when I'm awake, you know?"
Ernest Hemingway

"When I woke up this morning my girlfriend asked me, "Did you sleep good?" I said "No, I made a few mistakes."
Steven Wright

ODI predicted CPAP usage, however, this correlation between initial ODI and compliance is unfortunately not strong enough to be very useful in guiding decisions about prescribing CPAP.

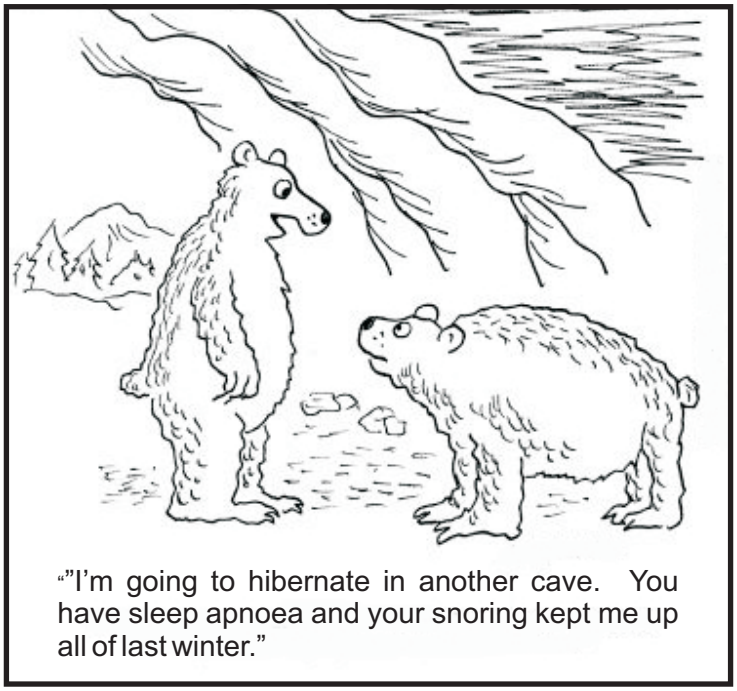
Trials of CPAP are becoming more common because it has been shown that it is difficult to confidently predict who will benefit and who will not

departments sometimes, alarmingly, lead to CPAP being stopped for a while). However, the more complex the way the data can be 'manipulated' the more unreliable it will become when comparing different units. For these reasons, the methodology will need to be more carefully defined before universal usage.

It is interesting to note that the overall 1 year rate was 66%. This implies that we put a significant number of people on CPAP who do not eventually keep it. Many patients in this group were trying CPAP as an experiment, to see if the trade off between the benefits and hassles of CPAP were worth it. Trials of CPAP are becoming more common because it has been shown that it is difficult to confidently predict who will benefit and who will not[3]. Needless to say, the patients where this is the case tend to be the less severe and that is why IMPRESS chose to define a severe group to measure the success of a unit's CPAP induction program. Finally it is interesting to note that the levels of compliance achieved in this audit and in other similar studies are at least as good as that with asthma and hypertension medications.

Conclusions

This audit sets an initial level of CPAP compliance at one year in patients with severe OSAS, against which future performance, and performance in other units, can be measured. Our view is that a continuing CPAP usage at one year of 94% in severe OSAS is very good, and our staff should be pleased with this outcome.



"I'm going to hibernate in another cave. You have sleep apnoea and your snoring kept me up all of last winter."

References

1. http://www.brit-thoracic.org.uk/Portals/0/Clinical%20Information/Sleep%20Apnoea/OSAS4-web.pdf

2. Kohler M, Smith D, Tippett V and Stradling JR. Predictors of long-term compliance with continuous positive airway pressure. Thorax. 2010;65:829-32

3. Whitelaw WA, Brant RF and Flemons WW Clinical usefulness of home oximetry compared with polysomnography for assessment of sleep apnea. Am J Respir Crit Care Med 2005;171:188-93

Sleep in the News

Ed Milliband's nose job
In July we learnt of the labour leader's operation to correct a deviated nasal septum, which was apparently carried out to improve his sleep apnoea. The well read amongst us will be well aware of the poor success rate of any kind of ENT surgery for sleep apnoea. Unfortunately stories such as this give people false hope that a simple operation will solve their sleep apnoea and they'll be able to ditch their CPAP.

Referrals in Scotland increase by 25%
On 6th October 2011 BBC news reported that doctors in Scotland are concerned by the increasing number of patients with sleep apnoea. There are 2500 new patients a year and this has increased by 25%, leaving sleep clinics struggling to cope. They suggested that this is reflected throughout the UK. A representive from the British Lung Foundation was interviewed to promote their current campaign(see below).

BLF Sleep Apnoea Awareness
The British Lung Foundation campaign to raise awareness of obstructive sleep apnoea has got off to an amazing start. Radio interviews including one on Radio 5 Live on the Shelagh Fogarty show talked about how the condition has affected a patient, was aired in October. (Click here to listen in http://www.bbc.co.uk/5live/programmes/schedules.) There have also been articles on Radio 1 Chris Moyles show and Aled Jones Radio 2 show. To listen to these click the link to the BLF Sleep website. OSA website pages.
The campaign also uses the Epworth score which can be completed on line at BLF but also the Pictorial Epworth Sleepiness Scale which is now available for departments to download to save worrying about translation. One interesting point of this pictorial version is the debate I had with the inventor Prof Martyn Partridge over the final question “Do you ever fall asleep whilst stopped in traffic”. I had always assumed this to mean the driver, but the original ESS doesn't actually specify this! For more on this excellent campaign which ARTP SLEEP supports fully, go to OSA home page on our website: www.lunguk.org/sleep
One impact of all this publicity around OSA is the increase in the number of completed tests to on-line ESS test which is over 16,539. This will inevitably produce more referrals for diagnosis and obviously more patients onto CPAP. The question arises does the NHS have the money to pay for this? I would advise all ARTP SLEEP labs to deliver the models they used to bring down waiting lists for 18 Weeks RTT initiative. WE need to respond to this because if the NHS can't deliver – there are plenty of new providers waiting to get a foothold in the market.

National Physiological Diagnostics Board (NPDB)
This advisory board meets to feed physiological scientists input into DH initiatives and new policy. Issues discussed at a recent meeting included **Healthcare Scientists Leadership Programme**. Keith Ison gave a presentation about the proposed Leadership programme for Healthcare Scientists. A key theme was that all healthcare scientists should demonstrate leadership by personal involvement in the process of change.

There is a plan to produce a framework document covering extended week/seven-day working which will feature a healthcare science document. With case studies of extended working in Physiological Science disciplines, including sleep. ARTP SLEEP have responded to this – thanks to all who contributed.

NPDB supported the development of a Diploma course for Healthcare Scientists to deliver enhanced awareness of Research to improve understanding of the process and they could support researchers.
Other discussion included the increasing recognition that the provision of quality diagnostic services is central to creating the new health landscape. Consideration is currently being given as to how Diagnostics policy might sit in the future **National Commissioning Board**.

Also there is a White Paper commitment to offer patients greater choice of service providers. As part of this DH

is looking at how the **Choose and Book** system could give patients access to a wider choice of Physiological Diagnostics with supporting decision aids. Are your services on Choose & Book yet?

NPDB will contribute towards the work supporting Choice of Diagnostics provider and identifying the information (including indicators of quality) that will help patients and others to make informed decisions when accessing diagnostic services. Consideration for developing internet based tools across all areas of physiological diagnostics has been made. These will help raise awareness and support GPs in identifying patients for further treatment/onward referral.

There is a new consultation by DH on **data returns** which closes 22 November 2011. (Follow link for more details http://www.dh.gov.uk/health/2011/08/data-consultation-to-cut-nhs-red-tape/) There is considerable variation between disciplines for data currently collected for physiological diagnostics with only six disciplines ("Sleep studies" is included) providing any information about their services. Generally, there insufficient data to have a clear picture of volume and quality issues and inability to create Atlases of Variation for most physiological diagnostic services. NPDB members are encouraged to consider the data requirements for their respective disciplines and to respond individually to the consultation. The NPDB as a group are making a collective response to consultation.

Any Qualified Provider (AQP) policy was summarised. The first phase of AQP is due to start in April 2012. 8 clinical areas identified as priorities in the first phase for the AQP pilots. These include adult hearing services in the community and diagnostic tests closer to home – which may include sleep.

For each of the eight areas a lead PCT cluster will be developing an implementation pack for moving forward in this area. All PCTclusters in England have been asked identify three areas that they would prioritise to implement AQP by April 2012.

You need to make sure your Trust is putting your sleep service forward as an AQP to beat off any competition from outside your area. It will be for commissioners to decide whether it was appropriate to use Any Qualified Provider or a tender model for commissioning particular diagnostic services.

There were also discussion about the requirement of Clinical Commissioning Groups to involve secondary care in commissioning process. The draft NHS Bill (follow link http://www.publications.parliament.uk/pa/bills/lbill/2010-2012/0092/lbill_2010-20120092_en_1.htm) includes the duty for Clinical Commissioning Groups to obtain advice from a broad range of people with professional expertise. This is set out in clause 23 new section 14V, and this is defined as people who have a broad range of experience in: a.) the prevention, diagnosis or treatment of illness, and b.) the protection or improvement of public health.

Improving Quality in Physiological diagnostic Services (IQIPS)

IQIPS, the accreditation initiative for all physiological services including sleep services has completed pilots in vascular physiology and is to be rolled out in respiratory and sleep physiology soon. The accreditation standards & criteria can be downloaded and used to test your own service. ARTP SLEEP are planning to run some pilot sites in the coming 3-6 months to test them, out before they get adopted more widely.
Without informing ARTP SLEEP, our colleagues in BSS have copied these draft IQIPS standards and tried to initiate there own accreditation scheme. Unfortunately the material they have used was copyrighted and will have to be removed form their website with immediate effect. ARTP SLEEP continue to work with IQIPS to get the accreditation process on track nationally. Please let us know if you wish to be a pilot site.

European Respiratory Society

The European Respiratory Society held the biggest conference in respiratory medicine in the world ever in Amsterdam in September. There were over 21,000 delegates! There were many sessions on sleep disordered breathing and related topics. All **ARTP SLEEP Members under 35 years** of age can join **ERS for FREE**!!!! You can access all the presentations from Amsterdam together with thousands of other presentations over the years as well a free access to ERJ, the Monographs and much more teaching and learning material. ARTP SLEEP strongly urge you and your staff under 35 years of age to join today! There is

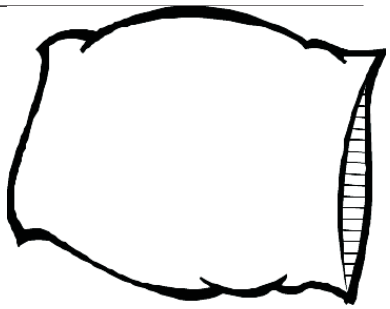
a link to ARTP website which enables you to easily join.

http://www.artp.org.uk/en/about-artp/membership/free-ers.cfm

Also, ERS are considering to run another joint Sleep Conference with ESRS like the one in Prague held in March 2011. Watch this space!

Pillow Talk

Manufacturer's news, new equipment and a bit of gossip!



Keeping inventories down ResMed now have CPAP/APAP/Auto SV/Bilevel S and ST devices on a single platform sharing the same humidifiers, tubing and other accessories and spares.

If you haven't already seen it keep an eye out for the ResMed's Pixi paediatric mask. ResMed went back to the drawing board for this mask and designed it specifically for children between the ages of 2-7 years. Following the success of the Quattro FX, we are now able to offer a Non-Vented version of this Full Face Mask.

Internally, Steve Birchall has been promoted to Business Development Manager Respiratory Care. Hannah Forrest has been appointed to take over Steve's South Thames territory

Hot off the press…. ResMed's RealSleep team are about to release a DVD aimed at helping patients discover all they need to know about sleep apnoea and it's treatment. Copies of the DVD will be available via sales territory managers and it will shortly be on the RealSleep website, www.realsleep.co.uk To be informed when the DVDs are available please contact marketinfouk@resmed.co.uk

Philips Respironics are pleased to announce the release of BiPAP autoSV Advanced-System One (Automatic Servo-Ventilation) therapy device.This new device blends all proven features from the previous BiPAP AutoSV Advanced algorithm within the System One platform and includes enhanced Encore Pro reports and instant monitoring parameters as well as being smaller, lighter and quieter. BiPAP autoSV Advanced System One is a unique device in the market with a proven algorithm combined with all System One platform benefits.

BLF OSA Awareness Campaign

BLF OSA news update November 2011

Click here for details

I'm Judy Harris, the Obstructive Sleep Apnoea (OSA) Project Manager at the British Lung Foundation (BLF).

We know that OSA is common and treatable, and yet there are many people who are undiagnosed. Estimates indicate that as many as 80% of people with OSA are undiagnosed[1].

OSA is a condition where the upper airway closes or partially closes during sleep, causing breathing to stop, sometimes hundreds of times a night. This leaves the person affected excessively sleepy during the day, and therefore at greater risk of accidents.

For example, undiagnosed individuals are more at risk of having road traffic accidents (RTAs) – the Department for Transport estimates 20% of fatalities on major roads are caused by sleepy drivers[2]. The IMPRESS service specification on OSA[3] says individuals with uncontrolled symptomatic OSA have an increased rate of having RTAs of 3-7 times that of general driving population.

OSA affects men, women and children.
You are more likely to have OSA if:

- You are a man and middle-aged;
- You are a woman past your menopause and not on HRT;
- You are overweight, with a neck size of 17 or over;
- You have a small airway, a set back or small lower jaw, large tonsils or a large tongue.
- You are a child with a particular condition / disability or are overweight.

Around 2% of middle-aged women and 4% of middle-aged men have symptomatic OSA (that is they have the breathing problems when asleep and are also very sleepy when awake)[4]. Up to 3% of children have OSA[5].

Having undiagnosed OSA may increase the risk of high blood pressure, stroke and cardiac arrest, and OSA is associated with Type 2 diabetes.

The core symptoms of OSA can be easily remembered:
Snoring when asleep
Stopping breathing or Struggling to breathe when asleep
Sleepiness (excessive) when awake
We call this "The Triple S"[6].

There are other symptoms too – these include being restless at night, waking at night with a choking feeling, feeling unrefreshed after sleep, having morning headaches and feeling irritable in the day.

NICE guidelines 139 on the treatment of OSA[7] state that Continuous Positive Airway Pressure (CPAP) is recommended for adults with moderate to severe symptomatic OSA.

CPAP is cost-effective – the machine costs about £250 (should last at least 5 years) and the facial mask about £100 per year. By comparison, one fatal road traffic accident costs approximately £1,500,000[8]. Other treatments include Mandibular Advancement Devices (for mild OSA) and lifestyle changes, including weight loss and sleep hygiene.

At the BLF we have just launched a major new project to increase awareness of OSA and help improve services.The project has 3 years' funding from Philips Respironics. During Year 1 we are researching the issues that affect patients and health care professionals, and planning our campaign. Next year, we will launch our OSA Charter, new information for patients and health care professionals, and begin awareness –raising events.

Objectives of the project:

- Promote OSA as a strategic priority for the BLF, the Department of Health, and governments in Scotland, Wales and Northern Ireland
- Help increase awareness of OSA to the public and professionals
- Help to find undiagnosed people with OSA and improve their quality of life
- Help to improve OSA services across the UK

The key issues that we are working on include:

- Definition of OSA - what is it?
- Prevalence - how common is it?
- Risk factors – what are they? This includes weight, sex, genetics, age
- Signs and symptoms - how to recognise if some-one has OSA
- Impact on quality of life – patients and others
- Diagnostics – assessments, GP awareness, referrals
- Treatment options – current, future
- Impact of treatment, impact of non-treatment
- Preventing OSA
- Cost of OSA treatment and non-treatment

We held Breathe Easy Week in June 2011 to launch the campaign, during which we held 158 events and achieved 65 pieces of media.We have uploaded the Pictorial Epworth Sleepiness Scale (courtesy of Professor Martyn Partridge, Imperial College) onto our website, which was completed by over 6,000 people in the first two months.

If you think you might know some-one with OSA or think you may have it, the visit the BLF website (www.lunguk.org) for more information, and to take the Epworth Sleepiness Scale.

If you would like to know more about the project, or you have OSA and would like to share your story, then please contact me directly: judy.harris@blf-uk.org

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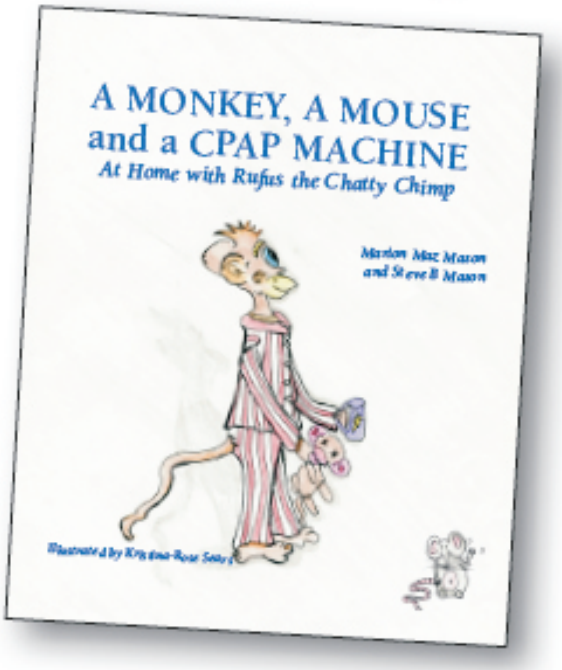

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Rufus the Chatty Chimp has lots of interesting things in his home, including his CPAP and its mask which help him when he's poorly.

He shows the reader around his home and describes the things he uses each day. The CPAP is just one of those useful things. He likes it, it is part of his usual bed-time routine, and he is shown wearing the mask and sleeping soundly.

Written especially for children with a family member who uses a CPAP or Ventilator machine, this illustrated book aims to allay their fears about it. The CPAP is included along with other household items, to show that these medical machines can be part of normal, every-day life for some people, whether grandparent, parent or child.

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Beware the Ides of March !

Alan Moore, ARTP Manufacturers Liaison Committee

For those of you who are relatively new to ARTP and particularly ARTP Sleep members, you may not be aware that ARTP has a Manufacturers Liaison Committee which is responsible for keeping an eye open for good and bad practice within the medical equipment industry which services our profession and for resolving issues which are brought to our attention through ARTP Watchdog. We publish a regular column inch or several in the ARTP journal, Inspire, and I felt it was time to introduce you to this facility. ARTP Watchdog is there for you and can be contacted via email at watchdog@artp.org.uk.

So, as it happens, I have a tale to tell. This article could just have easily have been called "Et tu, Brute" or, roughly translated to English, "Mind your back, they're sticking the knife in!".

ARTP through its Sleep Apnoea Consortium has developed and agreed Standards of Care documents for Sleep Apnoea Services and for Sleep Apnoea Diagnostics. A number of our medical equipment industry partners have signed up to agree to abide by these standards which set minimum levels of expectations for good practice and protection of the public. It is to their credit that they have signed such agreements. However, not all medical equipment industry companies represented through the Sleep Apnoea Consortium have yet signed up to the standards and one particular company, which has not signed seems to have a rather unsavoury and unfortunate propensity for going behind the backs of your sleep service leads to find unwitting supplies managers or medical engineering managers to try and engage your Trusts in discussions on how this company can help to provide CPAP and NIV services for your Trust. I hasten to add, not for you, but for your Trust. In other words, they want to take your service lock, stock and barrel and have you transferred under the 'Transfer of Undertakings (Protection of Employment)' (also known as T.U.P.E.) regulations to work for them or, to dispense with you altogether.

Now, ARTP is not opposed to independent sector provision of diagnostic or therapeutic services providing that relevant quality guarantees are in place. It goes without saying that it does help if the company actually has expertise in the field and has sufficient clinical experts on its books to be able to provide an appropriate level of clinical support.

So, why has this company not signed up to the ARTP Standards of Care? Dare I suggest that they may not be able to meet the standards? Perhaps they don't actually care about meeting the standards? Do they have the expertise within the company to actually deliver a quality service? Remember this current Government Coalition wants to drive forward "Any Quality Provider" (AQP) which is supposed to be based around best quality and not lowest cost!

Well, to date, this contractor supplying home oxygen – I don't need to identify the company has in regions where it holds an oxygen contract, a very small number of clinical advisors who are all nurses with no known reputation for expertise in the fields

Sleep Quotes

"People who say they sleep like a baby usually don't have one."
-Leo J. Burke

"Man should forget his anger before he lies down to sleep."
-Mohandas Gandhi

"For often, when one is asleep, there is something in consciousness which declares that what then presents itself is but a dream."
-Aristotle

Would you like to feature as next month's sleep person, or would you like to publish a short article?

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of CPAP or NIV. It does however have a small army of engineers who deliver and service oxygen concentrators. This company seriously contends that with its current workforce profile it could provide a quality CPAP and/or NIV service to your Trust? More importantly, would you and your medical colleagues trust such an organisation to do just this? Well, you need to keep an eye on this company and, others like it, who are going behind your backs and trying to do exactly this.

Is this just rumour and myth? No. In the case of my Trust they have tried to do this twice in the last 2 years. They have been caught red handed on both occasions because of the very strong working relationships I have with our procurement and medical engineering teams who have immediately copied emails/correspondence straight to me. In your Trust you might not be so lucky. So, please watch out for what is going on behind your backs. Your Trust management boards may not be as much interested in quality than they are in saving money, no matter what they say publicly. Quality is a highly variable concept which can be viewed through rose tinted spectacles if the price is right and there are only ever tut tuts when something goes horribly wrong.

Long may quality services rule and, for those independent sector companies who have some NHS contracts and who have signed up to the ARTP Standards of Care, our argument is not with you.

The Value of Collaborative Research with Other Branches of Medicine

Alan J. Moore, Head of Respiratory Physiology
Sandwell & West Birmingham Hospitals NHS Trust

The University of Birmingham Centre for Cardiovascular Sciences is based at City hospital, Birmingham which is part of Sandwell & West Birmingham Hospitals NHS Trust. The centre is one of the most prestigious in the world in its field and is headed up by Professor Greg Lip who I always describe as having published more papers than Rupert Murdoch and Robert Maxwell combined. Around three years ago I was approached by Dr. Omer Khair, one of our Respiratory Physicians with a specialist interest in sleep, and asked if I would review a draft ethics committee submission sent to him by Greg. The hypothesis was that concomitant endothelial dysfunction and impaired myocardial perfusion are present in otherwise normal subjects with moderate-to-severe obstructive sleep apnoea. The clinical trial involved testing for this in three matched obstructive sleep apnoea, hypertension, and healthy cohorts and, if the hypothesis was correct, then to determine if 26 weeks of CPAP therapy could reverse these macrovascular/microvascular abnormalities.

After a few minor 'tweaks' we were happy with the experimental protocol, it was submitted for ethics committee approval which was forthcoming, and then suddenly we're into finding potential recruits. Duration of the trial was an important factor as the salary of a research fellow was involved which is not inconsiderable. All patients to be considered as potential recruits underwent multi-channel sleep studies (SpO_2, Pulse rate, airflow, thoracic and abdominal effort, snoring, position) and all of our studies were performed in the patient's home. Data was downloaded the following morning and then all recordings were manually scored. Patients were categorised as normal, mild, moderate or severe according to S.I.G.N. guidelines. Recruitment of patients to the trial took several months and all the myocardial perfusion and other measurements were performed by the research fellow.

Throughout the duration of the trial, treatment of patients with OSAHS continued as normal. Our service is entirely physiologist led. We had no idea if any of the patients who were commencing CPAP therapy were included in the trial or not so there was no way in which anyone could inadvertently receive any kind of special treatment or management. Our standard procedure is to use an auto-titrating CPAP device for a period of at least two weeks to establish the required therapeutic CPAP pressure and then provide the patient with a fixed pressure CPAP device. This period of auto-titration is extended if required on a case per case basis where patients may be struggling to cope with CPAP. Routine follow up of patients is at 1 month post issue of a fixed pressure device and then further follow up appointments are agreed on an individual basis with patients depending on progress.

The results of the trial have received wide publicity in the sleep and hypertension press. 108 patients were recruited to and completed the trial giving three groups of 36 patients each. Greg Lip's hypothesis was absolutely correct. Subjects with obstructive sleep apnoea and hypertension demonstrated abnormal myocardial perfusion ($P<0.001$ for both comparisons), attenuated brachial artery reactivity ($P<0.001$), and cutaneous perfusion responses ($P<0.001$) compared with healthy individuals. Both hypertensive and obstructive sleep apnoea patients showed significant improvements in myocardial perfusion ($P<0.01$), brachial artery reactivity ($P<0.001$), and cutaneous perfusion responses ($P<0.001$) after 26 weeks of continuous positive airway pressure therapy.

Subjects with obstructive sleep apnoea and hypertension demonstrated abnormal myocardial perfusion, attenuated brachial artery reactivity and cutaneous perfusion response compared with healthy individuals. Both hypertensive and obstructive sleep apnoea patients showed significant improvements in myocardial perfusion, brachial artery reactivity , and cutaneous perfusion responses after 26 weeks of continuous positive airway pressure therapy.

Greg Lip has been widely quoted in the press and hopes that the work will bring greater awareness of the relationship between sleep apnoea and cardiovascular disease. In an American Heart Association statement he comments "The condition can be treated, and it is important that clinicians look out for it." From my point of view as head of the respiratory physiology service I am delighted at the positive outcome of the clinical trial. All the credit goes to my fantastic team for delivering a first class sleep diagnostics and CPAP service.

As to the future, because this was an open study, all of the sleep apnoea patients received CPAP therapy. Greg Lip believes that a proper randomised study will be needed to confirm the benefit of CPAP intervention on the epithelium. In my view, that raises the question as to whether such a randomisation would be ethical given the other known benefits of using CPAP therapy in respect of reducing or eliminating daytime somnolence. How could drivers who have significant daytime somnolence be randomised to a non CPAP arm of a trial? It will be interesting to see where this works now leads.

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Does Nasal Surgery for Sleep Apnoea work?

Vicky Cooper

In light of the recent news of Ed Milliband's surgery for his OSA, this brief article aims to look at the evidence for the use of nasal surgery as a treatment for OSA. The first question to answer would be what role does the nose play in the pathogenesis of sleep apnoea? Numerous observational and cross-sectional studies have documented a relationship between chronic nasal obstruction and sleep disordered breathing[1-2]. Also, experimental reduction of nasal patency and flow has been shown to induce apnoeas[3]. Clinically, nasal obstruction results from either anatomical abnormalities such as a deviated septum, nasal polyps or enlarged turbinates, or from inflammatory mucosal disease such as rhinitis. Most of us have experienced difficulty sleeping when we have a cold and it is not uncommon to find individuals who normally do not snore, do so when

they have nasal congestion. All this, would therefore sound promising that relieving the nasal obstruction would cure the sleep disordered breathing. However, the clinical evidence is not so convincing.

Early studies in the 1980s and 1990s which reported subjective outcome measures using questionnaires or visual analogue scales, suggested that septoplasty reduced snoring by 50-75% [4-6]. However, a more recent study, using objective outcome measures suggests that snoring is not relieved by nasal surgery despite an improvement in nasal resistance[7].

If we look further into the effect of nasal surgery on not only snoring but sleep apnoea the results are even less convincing. Some studies have found improvements in subjective outcomes such as Epworth Sleepiness score and snoring, but not in objective outcomes such as AHI[8-9]. Other studies have reported a statistically significant reduction in AHI[10-11] but the clinical relevance of this should be questioned. Lorente and colleagues[10] concluded that functional septoplasty is an effective treatment in patients with OSAS and septal dysmorphy. However, the AHI reduced from 45.8 to 31.9, thus the average post operative AHI would still be classified as severe OSA. Koutsourelakis[12] performed the only published randomised control trial, in which 49 patients with OSA and deviated nasal septum had either septoplasty (n=27) or sham (n=22) surgery. Only 4 (14.8%) of the surgery patients were classified as responders, having a significant increase in nasal breathing epochs (epochs containing more than three consecutive phasic nasal signals). The change in AHI was inversely related to the change in nasal breathing epochs, with responders having the greatest increase in nasal breathing epochs and the lowest baseline nasal breathing epochs. The authors concluded that nasal surgery rarely treats OSA effectively, but baseline breathing epochs can predict surgery outcome.

Patients with chronic nasal obstruction often struggle to tolerate CPAP[13]. Nasal surgery has been found to reduce CPAP titrating pressure and improve CPAP adherence[14-15].

In conclusion, nasal surgery alone, in patients with nasal obstruction and OSA, may improve subjective symptoms, but does not improve objective measures of OSA severity. However, there may be a role for surgery as an adjunct to CPAP therapy and a means to improving adherence in those patients with nasal obstruction that are struggling to tolerate CPAP.

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Crossword 2 Answers

Down
1. Bi-Level
2.Cognitive
3. MRD
4. Auto-titrating
5. Sleep
8. Physiology
9. Melatonin
11. Snooze
14. Phase
16. UPPP

Across
2. Compliance
6. Obese
7. Bariatric surgery
10. Sleep hygiene
12. Modafinil
13. Nasal pillows
15.Behavioural Therapy
17. Polysomnography

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