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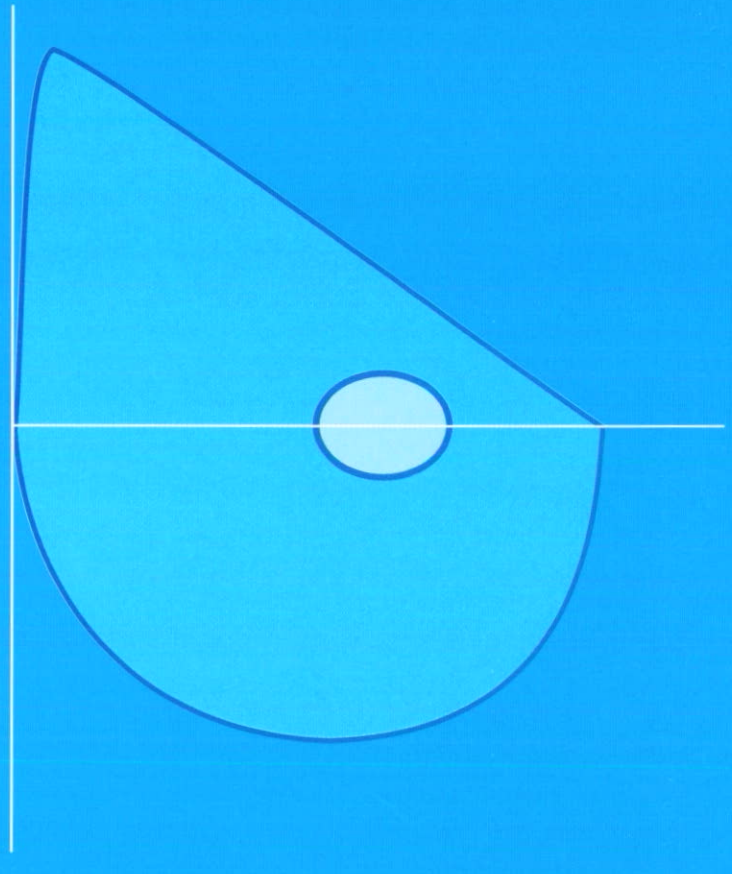
Inspire



www.artp.org.uk

The Official Journal of the Association for Respiratory Technology & Physiology

National Patients Safety Agency

The National Patient Safety Agency (NPSA) held a seminar last month with representatives from a range of Healthcare Science Professions to build on raising awareness of the work of the NPSA and to start to identify some of the key patient safety issues faced by these professions. Keith Butterfield was in attendance representing the Association for Respiratory Technology and Physiology (ARTP) and sharing best practice ideas in patient safety.

The seminar was led by Linda Thompson, Health Professions Project Manager at the NPSA. Linda's remit is to promote the role of the NPSA and the patient safety agenda amongst healthcare scientists and allied health professionals and give the professions a voice within the agency. She will also look at reporting of patient safety incidents amongst these professions, and work with these staff groups to develop solutions to identified patient safety issues.

In 2000, the Chief Medical Officer chaired an expert group on learning from patient safety incidents. The group set out its findings in the report *'An Organisation with a Memory'* (2000). Patient safety became a key component of *'The NHS Plan'* (2000) and a major strand of the NHS quality and clinical governance agendas. *'Building a Safer NHS for Patients'* (2001) set out the Government's plans to implement this agenda, including establishing a Special Health Authority – the NPSA.

One of the functions of the NPSA is to improve the safety of NHS patient care in England and Wales by creating and managing the National Reporting and Learning System (NRLS) for patient safety incidents. This will in time enable NHS Staff in England and Wales to report incidents to the NPSA that they are involved in or witness. The roll out of this system has now started and is due to be completed by the end of December 2004.

By collecting and analysing this valuable source of anonymous data, the NPSA will be able to identify trends and patterns of avoidable incidents, provide feedback to organisations to enable them to change practice, help develop models of best practice and systems solutions at a national level, and support ongoing education and learning.

The NPSA is currently working on 26 projects to scope patient safety issues and design solutions. Although not specific to Healthcare Scientists some of the projects already underway are relevant. The solutions work originates from a variety of sources including individual patient experience and patient groups, NPSA data and data from other organisations such as the Medicines and Healthcare products Regulatory Agency (MHRA) and international evidence.

Hand Hygiene

Hand hygiene plays a vital part in preventing the spread of microbes which cause infection in acute hospitals, especially MRSA (methycillin-resistant Staphylococcus Aureus). Six NHS acute trusts worked with the NPSA to test the efficacy of an integrated campaign to improve hand hygiene in hospitals. The NPSA is now evaluating the pilot and making preparations for a national roll-out.

Matching patients with aspects of care

The NPSA is researching issues relating to patient identification, such as bar coding in relation to medication, blood, procedure lists, dietetics and pathology specimens. The NPSA will work with the NHS Information Authority, the Department of Health and the Welsh Assembly Government among others to take this work forward. This research will be UK and internationally based.

As well as making sure patient safety incidents are reported in the first place, the NPSA is promoting an open and fair culture in the NHS, in which healthcare staff can report incidents without undue fear of personal reprimand. It will then collate reports from throughout the country and initiate preventative measures, so that the whole NHS can learn from each case, and patient safety throughout England and Wales can be improved.

The NPSA is developing a number of tools to assist trusts and managers in developing a patient safety culture. These tools include a *Patient Safety induction video*, that aims to ensure all staff are aware of their role and that of their organisation in improving patient safety. Root Cause Analysis is the technique being promoted to thoroughly investigate the causes of patient safety incidents and the tool kit and e-learning package to support this is available on the web site. The Incident Decision Tree toolkit aims to support managers and others in the fair and consistent management of staff when patient safety incidents and prevented patient safety incidents (near misses) are reported.

The NPSA are committed to finding out more about the specific patient safety issues facing Healthcare Scientists. A patient safety incident is defined as: *any unintended or unexpected incident which could have or did lead to harm for one or more patients receiving NHS funded healthcare.*

For further information, please visit the following website:

www.npsa.nhs.uk

or contact:

Linda Thompson, Allied Health Professionals Project Manager on 020 7927 9516, Linda.Thompson@npsa.nhs.uk

References:

Department of Health (2000) An Organisation with a Memory. Department of Health, London

Department of Health (2001) Building a Safer NHS for Patients. Department of Health, London

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Inspire

The Official Journal of The Association for Respiratory Technology and Physiology

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Bursaries are available to ARTP members, which can be used to support attendance at National ARTP, BTS or STS meetings. Other relevant respiratory meetings or approved training courses will also be considered. Bursaries are available to student, associate and full ARTP members of any grade. They can be used for partial or total funding of registration, travel and accommodation costs for the whole or part of the meeting/course. All bursaries are considered by the ARTP Executive Committee on the reason for the request and the commitment to an article for *Inspire*.

For further details or an application form please contact: **Jane Caldwell (Bursary Secretary), Respiratory Physiology A Level Medical Physics Rotherham Hospitals NHS Trust Moorgate Road, Rotherham S60 2UD. Tel: 01709 304571 or via e-mail: bursary@artp.org.uk**

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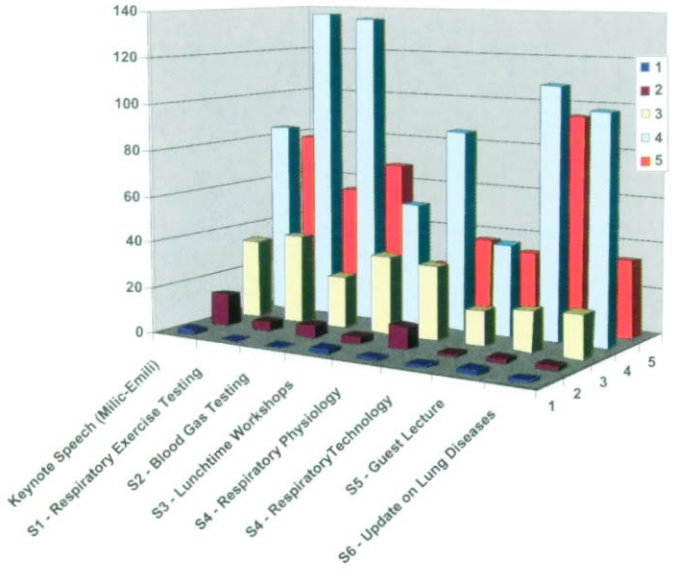
ARTP Conference 2004
Meeting Feedback

The Conference at the International Conference centre was well supported by both delegates and sponsors. This follows a pattern of successful conferences since the 25th Anniversary Conference in Birmingham in 1998.

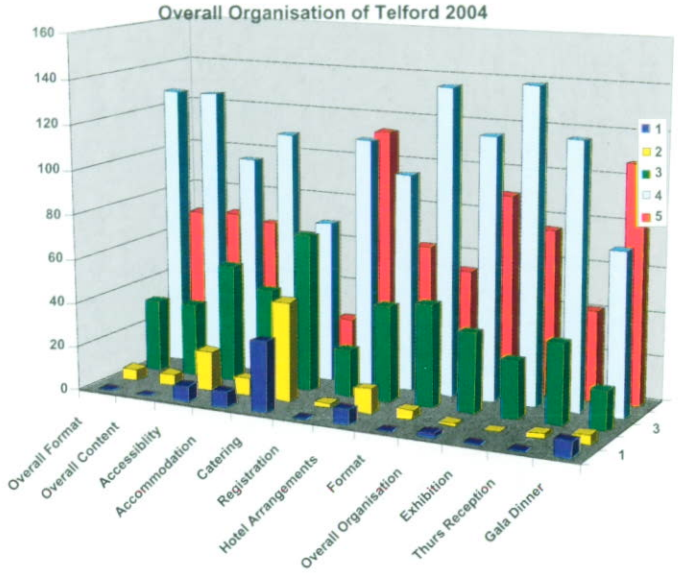
The conference feedback shows that the quality and not just the size of the meetings are of an excellent standard.

The organisation of the meeting was also highly praised by delegates and once again we have to thank the excellent skills of Jackie Hutchinson and all at EBS.

Delegate Feedback (Sessions) Telford 2004

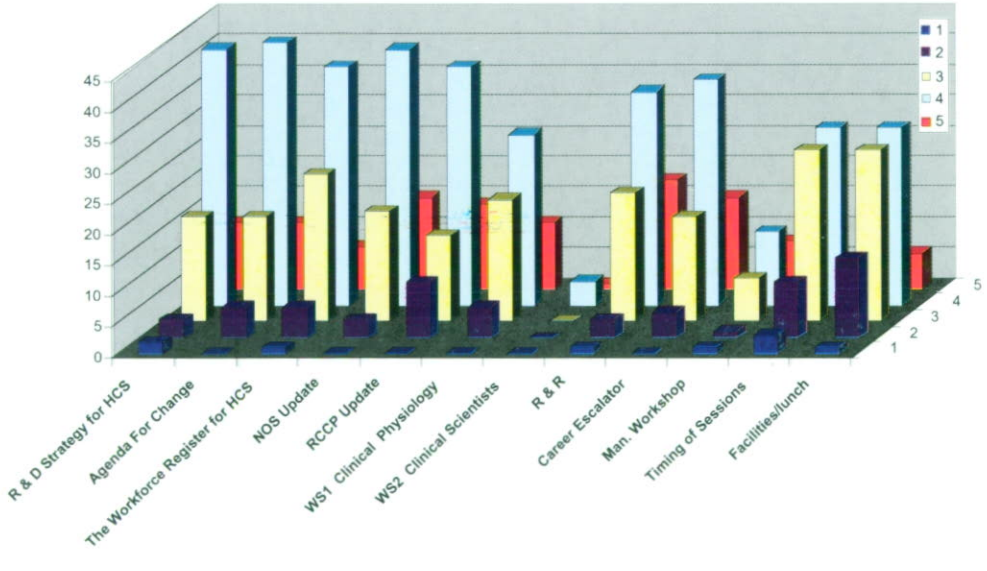


Overall Organisation of Telford 2004



The Heads of Department Meeting has also proved a great success. This provides an excellent opportunity for departmental leads to air views, see other ideas and network with colleagues. The feedback has been summarised as follows;

Heads of Department Meeting (Telford 2004)



The feedback is extremely helpful to the meeting organisers to plan future conferences and ARTP Executive Committee would like to thank everyone for filling their forms in. Well done!

Manufacturers report from the Telford Conference

By Nigel Clayton

The preparation of the exhibition hall started on Wednesday evening with the manufacturer's stands being clearly marked out on the floor. Roger Carter, Rod Lane and myself spent two hours crawling around the floor, laying out more than 300 metres of masking tape. In true ARTP tradition, a well deserved drink followed.

None of the exhibitors were allowed into the hall until 8.00am on Thursday morning. With the exhibition due to open at 1.00pm for the benefit of the heads of department, it meant some of the larger stands had to be erected in record time. Slipping and sliding in the treacherous conditions outside did not help the manufacturers get their equipment in to the hall. (NAME?) One of the Viasys team slipped and had to be taken to hospital by ambulance, suffering with concussion and a broken finger.

As we came out of the heads of department meeting for lunch it was clear that the earlier battleground had been transformed into what can only be described as our most successful gathering of exhibitors to date. 36 impressive stands filled the large arena, including several new exhibitors.

Buzz Lightyear demonstrates the CA Star hood from Vital Signs

If you missed the conference or were unable to visit all the exhibition stands, here is a brief review of what the manufacturers have to offer us for 2004.

Vital Signs/BREAS displayed the latest innovation in NIV delivery. Called the CA Star, the hood does away with mask related problems. It is even possible to keep it on whilst eating through the large removable port on the side. (I guess the pressure must be turned off at this point otherwise food gets splattered around the room.) Also on display was the uV102+ which now features adjustable triggers, improved mechanics and an external battery.

Instrumentation Laboratory were demonstrating the latest version of the GEM Premier 3000. This now features improved cartridge stability, allowing 75 samples to be performed over an increased time span of four weeks. Sample precision may also be verified with the option to run auto QC following each sample.

Cranlea now offer an impressive catalogue featuring many products for the sport and exercise physiology market. They supply equipment from well known names such as Cortex, Woodway, Mega, Lode, Hans Rudolph and BodPod. On display was Statera™, a new exercise stress test system, which is claimed to calculate patient risk using linear regression analysis without the need for a maximal effort. If horses are your forte the catalogue even features a MetaVet equine system designed to assess the heart, lung function and metabolic responses of horses. Who knows, one day this system might be adapted to suit our increasingly obese population!

Intersurgical's latest products on display included the Hot Top nebuliser, so called for its speed of operation and the Aquamist humidifier, which is designed to plug on to oxygen flow meters to humidify inspired oxygen across the range 28% - 60%.

S-Med announced that they now supply bacterial filters for all makes of lung function equipment that may be supplied with or without a disposable nose clip. A new type of filter with a built in oval mouthpiece will also be made available shortly. We hope to publish test data from Porton Down which compares the S-Med filter with several other well known filters in a future edition of Inspire.

The **Viasys** stand was certainly well manned with many sales staff ready to talk business. New products this year included:

- Jaeger software version 4.6, which is designed to run under Windows XP.
- Software improvements to the impulse oscillometry system.
- Masterscreen CPX which now replaces the Oxycon Delta.
- Viasprint, the new exercise bike incorporating blood pressure and/or ECG.
- Viasys Vmax Spectra exercise system which features dual flat screen monitors which allow ECG parameters to be viewed separately to respiratory parameters.

Air Products offer a complete oxygen service including oxygen concentrators, liquid oxygen, oxygen conservers etc. Air Products also offer a Total Holiday Service which allows delivery of oxygen to patients whilst on holiday throughout the UK and Europe.

Stowood Scientific Instruments (SSI) always seem to have new products on offer at the ARTP conference. This years innovative product is a new CPAP interface from InnoMed Technologies, called the Nasl-Air II. Basically a large pair of nasal specs which make a snug fit inside each nostril in order to deliver the CPAP pressure. This product should be beneficial for those patients who feel the conventional nasal mask is too claustrophobic or for those patients who develop pressure sores.

Stowood are also renowned for producing oximetry download software, which is available for most makes of oximeter. New to the list is software for the Artemis Tosca and Radiometer TCM 400 transcutaneous analysers,

First time exhibitors, **Albert Waeschle**, were displaying the MIR range of spirometers. Starting at just £225, the Spirodoc is a hand held turbine device capable of measuring basic spirometric parameters. The results may be printed directly to a standard A4 printer.

Spirotel is a similar device which also has the option to measure and record pulse oximetry. The information held on the device may be transmitted down the telephone without the need for modem or wires.

Top of the range is a portable desk top spirometer, the Spirolab II. This features over 30 test parameters and an internal data base capable of storing 1500 complete tests.

A feature of these devices is that software revisions are available over the internet. Life would be so much easier if all manufacturers offered this type of service!

Also new to the conference was **Bio-Stat**. Suppliers a portable blood gas analyser, the Osmetech OPTI™ CCA may be operated from a rechargeable battery pack. This makes it ideal for use in the field or at the patient's bedside. The basic unit features pH, PCO_2, PO_2, tHb and SaO_2. This may be upgraded to include Na^+, K^+, with a further option on Ca^-, Cl^- or Glu. Bio-Stat claim the analyser to be low cost to operate, as no external solutions are required for calibration or rinse.

Ferraris Respiratory continues to expand their range of products. The latest offering this year is a new cardiac output module for the ZAN exercise test equipment which utilises the Fick principle to make the measurement. The PiKo I FEV_1/PEF monitor, which was released at last years conference, has now been updated to display results using the European, ATS and Wrights flow scales.

Trudell Medical markets an interesting spacer device for delivering inhaler therapy. The chamber also acts as a positive expiratory pressure (PEP) device which has six expiratory pressure settings designed to be used by asthmatic / COPD patients. Trudell claim that PEP therapy can reduce air trapping, promotes bronchial hygiene and improves bronchodilation. The aerosol delivery and PEP operate independently and do not interfere with each other.

Tyco Healthcare has introduced a small, lightweight, bi-level 330 ventilator to their range of equipment. Also new to the conference was HypnoPTT and HypnoScan, a respiratory monitoring and analysis software system, designed to assess sleep disordered breathing. It can record up to 11 parameters, including apnoea / hyponoea, respiratory effort, inspiratory flow limitation, autonomic micro arousal, SpO_2 and snoring. (I feel that HypoScan would have been a more appropriate name for this system.)

Also new to the conference, **Dräeger Medical** were displaying the Siesta PSG ambulatory polysomnography system, featuring 32 user definable channels. This, together with their range of Lunar humidified CPAP and portable mains/battery ventilators allows diagnosis and treatment of sleep disordered breathing.

Carina VT Ltd were launched last summer and now supply the Pulmonetic range of portable ventilators. Two new non-invasive ventilators were also on show, the Smartair plus and the Legendair. Made in France by Airox, both are extremely quiet (<28dBa) and feature internal, long life, lithium ion batteries.

Micro Medical continues to develop their spirometry range with the introduction of SpiroUSB – "spirometry in 3 easy steps". This features a turbine unit which simply plugs in to the USB port of a computer. This automatically launches the software and within seconds it is possible to record a patients spirometry. In my opinion the sales leaflet should read "spirometry in 4 easy steps", as it forgets to mention a fundamental extra step - CALIBRATION. Also, watch out in Spring for Micro Medical's latest touch screen Super Spiro II.

Profile Respiratory Systems were demonstrating the REMstar C-flex CPAP system which features expiratory pressure reduction to improve patient comfort. It is also available with or without heated humidification. The BiPAP Pro with Bi-flex™ (sounds like a new washing powder) was also on show. This system "softens" the airflow (must also have added fabric conditioner) in inhalation and exhalation to one of three settings, to make the patient more comfortable.

Also new was Vapotherm which is a vapor-phase hydration system that delivers high-flow air or oxygen by nasal cannula. This system does not require sterile water and has a typical operating flow range of 5-40 lpm.

Once again **Boehringer and Cephalon** were the two drug companies supporting this years meeting. Both companies

were promoting the same products as last year. Cephalon were promoting Provigil (modafinil), a drug designed to promote wakefulness, which is being marketed as a treatment for excessive daytime sleepiness found in sleep apnoea and narcolepsy. Boehringer were promoting Spiriva (tiotropium), an inhaled medication for those with severe asthma and COPD.

Fisher and Paykel's latest products were on display. The FlexiFit™ series of nasal masks have been on the market for just four months. The masks feature a front swivel, (allowing greater freedom of movement) and have also been designed such that nightly adjustments of the head gear are not required. Also new to the market is the new HC210 series of CPAP systems. This is claimed to be the smallest CPAP of its type and may easily be converted to heated humidification with a simple add on kit.

An excellent catalogue featuring nebuliser, oxygen and humidification therapy is available from **Hudson**. With more than seventy pages you will always find that respiratory or anaesthetic product you have been looking for including small hand held oxygen analysers.

Intermedical now has the distribution rights for the NDD Easy One hand held spirometer. This is the first commercial device to measure flow by ultrasonic means. Later this year an additional feature of this device will be the measurement of TLCO. Intermedical also supplies the Medel range of nebulisers, including the silent Micro air pocket nebuliser.

VivoMetrics were exhibiting the LifeShirt for the first time. This is an ambulatory system which incorporates many sensors to continuously monitor such parameters as respiration (volume and frequency), activity and heart rate. The system can be calibrated to provide accurate respiratory volume data whilst the vest is being worn. This makes it ideal for monitoring the patients activity day and night. The software package also provides sophisticated signal analysis and reports based on the patients activity.

Clement Clarke announced that as from April, the NHS Logistics catalogue will stock a relatively cheap CO monitor at just £150. Also available from the catalogue are disposable spirometry mouthpieces fitted with a one way valve. These cost £19.50 for a box of 200, catalogue number FDD 467.

B&D Electromedical, well known for their Nippy range of ventilators, now produce the Nippy Junior which is suitable for any child ranging from 3 kg through to adult. Also available is a new paediatric gel mask and nasal pillows.

Air Safety continues to supply filters for all existing and new designs of CPAP and ventilatory support equipment. Spiroguard, the lung function filter, continues to sell well and Air Safety stated that they will remain price conscious in what is becoming an ever increasing competitive environment.

Pulmolink were demonstrating the latest addition to the Medisoft range of equipment. Spiro Air has been developed in response to a survey of UK lung function laboratories. It offers the traditional helium dilution lung volume measurements in a fully automated package. Morgan MDAS users can also transfer their existing data bases on to this system.

Beaver announced the release of the CPX Ultima. This replaces the CardiO2 CP system. It features new digital technology, may be interfaced with up to eight external devices and runs under the breeze software. The system also features a novel keyboard which has the computer built inside it.

DeVilbiss were demonstrating a unique mask called the Flexair. Supplied in several sizes, it incorporates a finger-operated pump to inflate a foam-filled air bladder cushion for an improved seal. Another useful feature is a quick-release mechanism which allows the user to detach the mask from the forehead pad without removing the headgear. DeVilbiss also announced the new lightweight PD100 oxygen conserving device. This is claimed to give savings in oxygen consumption of 3:1 compared to systems which deliver a continuous flow of oxygen.

The **Vitalograph** 2120 spirometer has become more popular lately due to its versatile printing facility. Results may be printed directly from the base station or downloaded and printed via a PC. Vitalograph has also recognised that the filter market is becoming more competitive and they too are also keen to supply these in bulk at very competitive prices.

Artemis had plenty of new equipment to demonstrate, including the latest in CO_2 and O_2 monitoring. The Linde Tosca measures CO_2 transcutaneously together with oxygen saturation via a small earlobe probe.

Also new was the Rad 5 hand held pulse oximeter which features Masimo technology designed to eliminate artifact from the oximetry signal. This is particularly useful when exercising patients in the laboratory.

Finally, Artemis also sell the VersaMed iVent. This is a bi-level ventilator with options to build in invasive ventilation if required.

ResMed were demonstrating the CS2 ventilator. This is ideal for use in heart failure and Cheyne Stokes respiration. It learns the patients breathing pattern whilst awake and maintains this pattern throughout sleep.

The VPAP III ST-A is now ResMed's top of the range bi-level therapy ventilator. It has a full range of alarms, adjustable triggers and cycle thresholds. It also features a data collection chip.

The Activa mask was also on display. Air entering the mask inflates a cushion which sits around the mask frame. This allows the frame to move independently of the mask cushion thus helping the cushion to stay in place and maintain a good seal during active sleep.

And finally, **Radiometer** chose the meeting to release the TCMTM4 transcutaneous O_2/CO_2 monitor. This model features a fully integrated automatic calibration, Windows CE and touch screen technology.

"ON THE BLOWER"

By Nigel Clayton, Alan Moore and Brendan Cooper

Alternative service support for Morgan manufactured products

Following the comment from Morgan Medical in the last edition of Inspire regarding another company offering support for their products, Pulmolink have asked me to make the membership aware of the situation from their point of view.

Morgan Scientific Inc. of the USA is a solely owned company of the Morgan family. President Mr Patrick Morgan now distributes their software product ComPAS designed to complement the Morgan test systems through Pulmolink. The ComPAS software is a windows based product designed to replace the existing MDAS product. The ComPAS software has overcome many of the problems with printing and operation, working on an operating platform that will work with Windows 98, Windows 2000 and Windows XP.

The ComPAS software also works with the Medisoft Pulmonary Product range that Morgan Scientific Inc distribute in the USA.

The ComPAS software also complements Medisoft products with in the UK. At some centres Pulmolink were asked to provide service for customers that were moving to a mixture of products from Pulmolink. We always aim to help our customers, so to meet this we employed Morgan Trained Engineers and ensured a source for spares and accessories.

Kevin Hogben

NC

Pari Medical

Pari have just released their latest lightweight nebuliser compressor, the Pari Uni light Mobile. It weighs just 400 grams and may be used on all mains voltages. An optional rechargeable battery pack is available which slots underneath the compressor. This has a 55 minute capacity and may be charged via the mains or 12 volt car adapter.

NC

Pingo!

Shill Medical also distribute a handy portable ultrasonic nebuliser aimed at the younger end of the market. Called the Pingo it comes in the form of a plastic penguin. Removing half of the penguins head gives access to the nebuliser mouthpiece. This device may also be run from the mains, rechargeable battery or 12 volt car adapter. For older patients they produce the Travel nebuliser which is basically the same without the penguins body. I prefer the penguin myself!

(Brings a whole new meaning to pick up a penguin… when you feel a little wheezy p-p-p-pickup up a penguin!!)

NC / BC

The filtration market continues to expand

Shielder, a French company, have entered the filter market. Using the Filtrete G150 medium produced by 3M, the Ergofilter SP1 and SP1M offer a viral efficiency of 99.89% and bacterial efficiency of 99.98%. These figures are based on tests performed by Porton Down, however the flow rate at which they were tested is not specified. (I suspect they were tested at 30 litres per minute.) From our point of view, another competitor in the filter market can only be good for price competition, provided they attain the correct standards for lung function testing. If you are currently paying more than £1.00 per filter then you are paying too much.

NC

MedGraphics SpiroCard Spirometer

Beaver Medical have announced a special offer on the MedGraphics SpiroCard Spirometer. The unit features a disposable pre-calibrated pneumotachograph which simple attach to a card which slots into any modern laptop. Predicted values, trend reports, and user customised reports all feature in the software. As the data is stored in a Microsoft Access database it is possible to report and adapt the data in many ways. A useful option is the bronchial challenge software for methacholine, exercise or cold air challenges. If purchased before June 30th 2004 the package can be yours for less than half the normal price. (It might also be worth trying to get a deal on the disposable pneumotachograph as these are slightly more expensive than a disposable filter.)

NC

Ferraris Respiratory Europe Ltd

A new European respiratory arm of the Ferraris group was announced on 30th March. The unification of Morgan Medical Ltd. with Ferraris Medical Ltd. has resulted in the new name of Ferraris Respiratory Europe (FRE).

The new headquarters, located in Hertford, will also incorporate a new customer service and training centre. This centre will be fully operational from 1st May 2004.

New contact details:

Ferraris Respiratory Europe Ltd.

Harforde Court, John Tate Road,

Hertford SG13 7NW

Tel: 01992 526300

Fax: 01992 526320

NC

Update on Vital Signs/Breas

In the last issue I referred to problems customers were facing with support of Sleep products from Vital Signs. Nigel and I met with Steve Hill, UK Managing Director of Vital Signs, at the Telford conference to outline the concerns conveyed to us by members. We are assured by Vital Signs that they are addressing the issues we have raised. Steve Hill outlined to us that they inherited a number of issues when they took ownership of Breas including poor documentation of servicing and other issues. He went on to inform us that they are in the midst of setting up a programme whereby all owners of Breas

SC20 sleep systems can have the internal software upgraded by their local representative on site and that upgraded analysis software will also be provided. He also informed us that as of September 2004, the agreement under which Deva Medical provide servicing for Breas equipment will terminate and that contractually that was the earliest date on which they could terminate the contract. Vital Signs, we are advised, are to set up their own service operation from September.

As ever we take what we are told by the managing director of a company in good faith. We rely on yourselves as members to keep us informed as to whether the promises made are kept.

AM

Update on Radiometer

You may recall from one of last year's issues that I reported on problems experienced at the hands of the Radiometer Service Department. Well, intransigence unfortunately has been the name of the game with the service part of the organisation. Not so, however, with the sales force who, bless them, came up with a novel solution to ensure that I don't end up with a problem blood gas machine over a bank holiday. Rather than the demonstration analyser for our local sales representative sitting in her garage over a bank holiday, it now sits in my department as a back up machine. Simple but effective. My thanks to Susie Boden and Andrew Meredith.

AM

Setting Minimum Standards for Service Response

This is an issue that we have alluded to previously. We will hopefully before the next issue commence discussions with the lung function manufacturers on minimum standards with the aim of all the manufacturers signing up to them.

AM

Devilbiss CPAP Update

In between making effigies of Brendan to burn on their CPAP camp fire as our illustrious chairman referred to the Devilbiss decision to change power supplies in a number of their 9000UK devices in his conference after dinner speech, I can report from personal experience that the entire procedure was absolutely painless and went like clockwork with virtually no disruption to my team or the busy lives of the patients involved. Well done Devilbiss !

AM

Remember, if you have any problems regarding equipment malfunction, quality control/ calibration, service response times, software issues etc. please feel free to voice your opinions off the forum so that we don't get sued.

Please contact the Manufacturers Liaison Committee direct at Watchdog@artp.org.uk. We will then be able to collate this information including verification of accuracy before commencing on an appropriate course of action.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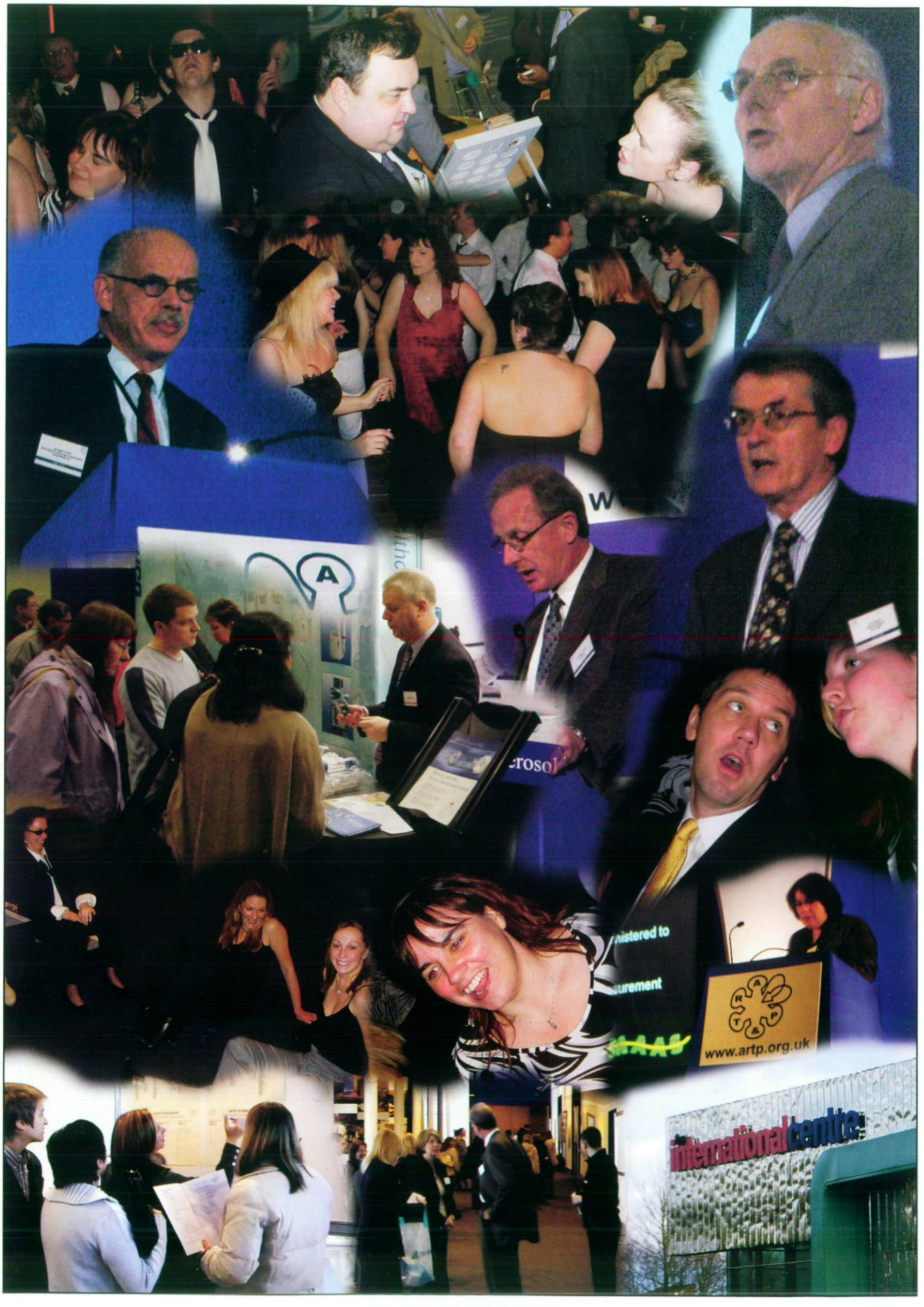
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Science and Engineering Ambassadors

As I'm sure most lung functions departments have experienced, the recruitment of suitable respiratory physiologists is by no means an easy task. The job title of respiratory physiologist is not exactly at the forefront of our promising science student's minds when making decisions as to what career path they should take. For some reason Healthcare Scientists seem to lack the glamour and pull of Doctors Nurses and Physio's, personally I blame the Carry On films, (surely a whole plethora of innuendo's was missed by not featuring the Respiratory department.)

But things seem to be changing, the NHS careers adverts feature healthcare scientists more and more but frustratingly I've yet to see respiratory physiologist's get a mention and so it seems that the onus lies on ourselves to promote the vital job we are doing. This is where this article is leading, after hosting a healthcare scientist open day an opportunity arose to become a Science and Engineering Ambassador or SEA.

The SEA's scheme is a DTI funded initiative, to work with and support young people in Science, Technology Engineering and Maths activities. With the ultimate aim being for more young people to take up careers within these fields.

The idea appealed, as under the banner of a SEA it would give me the opportunity to promote our profession to young people and raise the profile of our department and hospital within the local community. (And yes I was impressed at the thought being known as an Ambassador; Ferrero Roche has a lot to answer for)

The process involves becoming registered on the SEA database, which importantly includes the CRB checks. This required attendance at an evening presentation, where all the forms were filled and a wait of a couple of weeks for the CRB check to take place. Once registered the SEA public liability insurance is included.

The SEA co-ordinator for the London area then informs the SEA of events that are taking place which you are invited to attend. In the past 6months we have been invited to represent HSC's at a Science fayre in Ilford, provide an NHS stall at Leyton Orient football ground for a young person careers fayre, embarrassingly a team for a five a side football competition and a workshop relating to healthcare science during a schools summer careers week.

At each of the open days we have been involved in we have been able to make the scheme work for us by promoting Healthcare Scientists and even more specifically Respiratory Physiology as a career. We have forged links within our local community especially with teachers, students and careers advisors, we have got City of Westminster College involved and thus built bridges with the people providing the higher education. It has also raised our profile immensely, with invitations to visit schools and interest from sixth formers to come and visit our laboratories.

On first impression the scheme works well, it is well organised and involves as little or as much involvement as you wish to give. It provides an excellent avenue for continued personal development and is something that my staff and I are enjoying. With the recruitment and retention of staff a growing concern for our profession the SEA scheme provides an opportunity for us to take some small steps to rectify the problem.

Damian Muncaster
Snr Chief Respiratory Physiologist
Homerton Hospital
London.

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http://www.setnet.org.uk/ambassador.html

Ferraris Cardio-respiratory becomes Ferraris Respiratory Europe

The familiar address of 4 Bloors Lane, Rainham, Gillingham, Kent is no more. For more years than I can remember, this was the base for PK Morgan. With the change of ownership to Ferraris and the evolution of the company, Ferraris Cardio-respiratory have changed names once more and moved into new premises in Hertford. Ferraris Respiratory Europe, as the group is now called, is situated alongside Del Mar Reynolds Medical, which was also acquired by Ferraris in 2003.

The new service department

Alan Moore and I visited the new headquarters in August to discuss issues relating to quality / cost of service, training, software applications and the new structure of Ferraris Respiratory Europe. The meeting was very encouraging.

With more than ten years of service management experience, we felt Steve Elms could fulfil the commitment to offer a 48-hour call out to all customers with valid service contracts.

All Ferraris customers should be receiving a customer satisfaction survey to complete. This will help Steve to ensure the promise of a fast and reliable service.

We also discussed installation training. It was agreed that it would be useful if installation personnel have some background knowledge of respiratory physiology. We recommended that the ARTP part one course should be taken by at least one member of the field installation team.

Software applications were discussed with Graham Peck and included issues with programming, PC standardisation and transfer of data between different systems.

Ferraris have also added a new training centre, which houses several full lung function test facilities, including plethysmography and exercise equipment.

Watch out for the latest equipment releases which include the Legend - a small desk top spirometer, and the Eagle - a new modular full test facility.

The new customer training facility

Key personnel details are as follows:

Bob Bemister heads the group as General Manager.

Chris Barden has recently been made International Sales Manager.

Adrian Fineberg has recently defected from Viasys and joins Ferraris as UK Sales Manager.

Graham Peck continues as Technical Support Manager.

Steve Elms acts as Service Manager for the whole group.

Case Study – Obstructive Sleep Apnoea with Another form of Treatment

By Harry Patel, Dudley Group of Hospitals NHS Trust

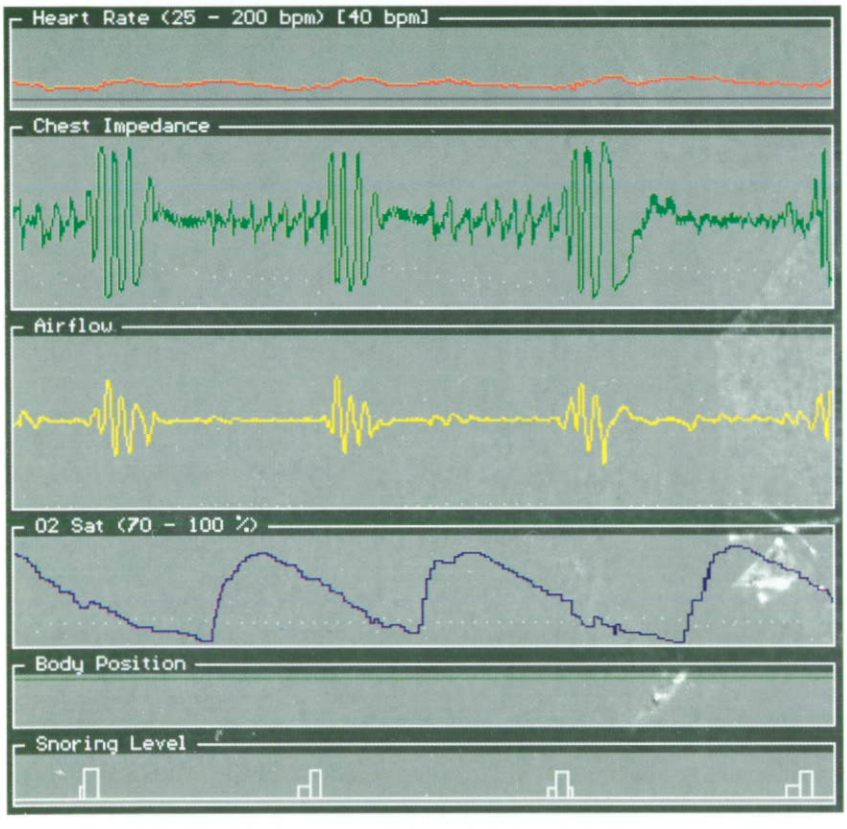
Moderate Obstructive Sleep Apnoea (OSA) was diagnosed but the preferred treatment of choice (CPAP) could not be tolerated. Another treatment for OSA, a Mandibular Advancement Device was used with some success.

Case Report

When Mr PM, a 37 year old, was referred to the Lung Function Unit in late 2001, he presented with complaints of loud snoring and witnessed apnoeas from his wife.

He is a non-smoker and drinks alcohol occasionally, usually at the weekends. He works as a production foreman for a brick-making factory and has a fairly sedentary lifestyle.

During history taking he complained of being irritable during the day, associated with lethargy, daytime hypersomnolence and loss of recent memory. His wife says he snores so loudly that his next-door neighbours are disturbed by the snoring. His problems have been present for the last 12 years, but have become worse over the last two years, which have forced her to sleep in a separate room. He rated himself as 'mildly' sleepy on the Epworth Sleepiness Scale (score of 14, normal is less than 10) and showed reasonable sleep hygiene on a two-week sleep diary. At a 176 cm and 78 kg, he had a near normal body mass index of 25.2 and a collar size of 15 inches.



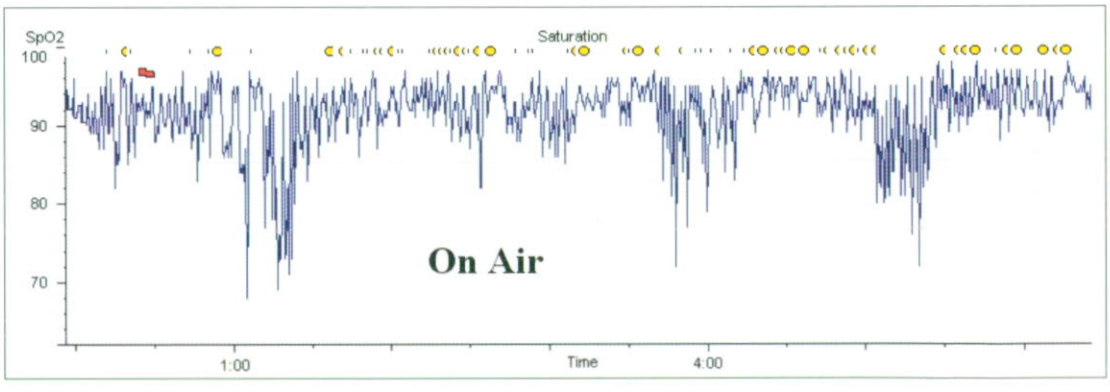
Five minute tracing of Mr. PM's limited polysomnogram study on breathing air.

Lung function tests, which included flow volume loops, gas transfer and lung volumes were all within normal limits as were arterial blood gases on breathing air. Routine blood tests, biochemical profile indicated no abnormality. Thyroid function normal. Chest x-ray and ECG sinus rhythm, also normal.

On examination he looked well with no pallor, cyanosis, jaundice or lymphadenopathy. Oropharyngeal examination showed enlarged tonsils with crowding of the oropharynx. Pulse 70 bpm and regular. Blood pressure 140/70. Heart sounds were pure with no murmurs. Auscultation of the chest revealed normal breath sounds with no wheeze or crackles. The rest of the examination was unremarkable.

A 530-minute limited polysomnographic study (Edentrace) performed domiciliary, revealed 19 apnoeas and 47 hypopnoeas per hour of sleep. We could not verify that these events led to transient arousals or awakenings as we had no EEG (electroencephalogram) recordings. Pulse oxygen saturation dropped as low as 70%. He snored approximately 74% of his sleep time. A separate simple overnight pulse oximetry showed an ODI (oxygen desaturation index) of 51.2.

Mr PM was diagnosed with Obstructive Sleep Apnoea (OSA). The department's usual treatment of OSA is CPAP (Continuous Positive Airway Pressure). He was also referred to the ENT surgeons for assessment of his upper airway.



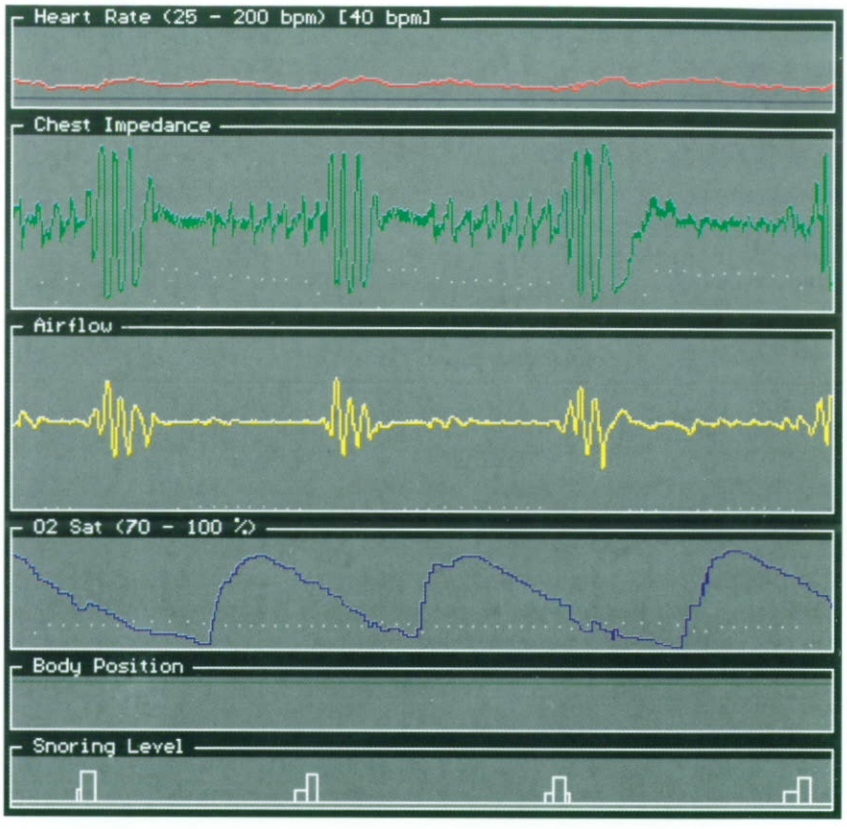
Five minute tracing of Mr. PM's limited polysomnogram study on breathing air.

When reviewed again after two months trial of CPAP and education on use, Mr PM was unable to tolerate this treatment. He could not keep the mask on for a significant period of time and found the mask induced claustrophobia. The ENT consultation reported his tonsils were huge with a long uvula, and his jaw rather small. They were reluctant to carry out any palatal tonsil surgery as the use of further CPAP could be jeopardised.

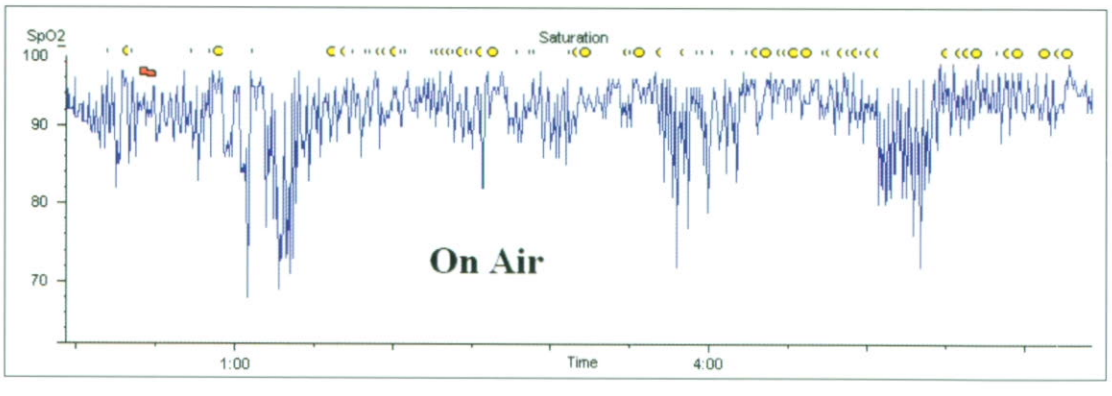
After specialist advice from the regional sleep centre (Stoke-on-Trent) and the ENT surgeons, it was agreed that Mr PM be fitted with a mandibular repositioning splint, which he was keen to try.

In December 2002, Mr PM returned to our sleep clinic to assess the effect of a fitted mandibular advancement device. He reported significant improvement in daytime alertness and reduced snoring noise. The Epworth Sleepiness Scale was 9 and his wife indicated they now sleep in the same room again.

A repeated overnight limited polysomnograph whilst using the device revealed significant overall improvement. He had a combined total of 6 apnoeas and hypopnoeas per hour of sleep with a lowest oxygen saturation of 86%. He snored for only 8% of his sleep time. The simple overnight pulse oximetry now showed an ODI of 10.7. Mr PM's OSA was improved by the mandibular advancement device.



Five minute tracing of Mr. PM's limited polysomnogram study with mandibular advancement device in place.



Mr. PM's simple pulse oximetry trace showing improvement in oxygen saturation with mandibular advancement device in place.

Discussion

Obstructive Sleep Apnoea (OSA) is estimated to affect 1 – 2% of middle-aged men (30 – 65 years) in the UK (SIGN, 2003). OSA is primarily encountered in middle-aged men but can affect both sexes and all age groups. It is often associated with obesity but cannot be ruled out on age, sex, weight or other characteristics alone. Upon examination, OSA patients are typically found to have narrow airways with redundant tissue. Other contributing factors include craniofacial abnormalities, use of alcohol or sedatives before bedtime, a neck size larger than 17 inches and massively large tonsils and adenoids.

Symptoms include snoring, often loud and accompanied by snorting and gasping; periodic cessation of breathing during sleep; daytime sleepiness; impaired concentration; and early morning headaches. Often, those affected usually attribute their fatigue and the other symptoms to age, stress or some other health problem.

Patients frequently seek help after a bed partner or roommate complains. In others, daytime sleepiness becomes so profound that they can no longer function normally. It is not uncommon for patients to report falling asleep while at their desks, waiting in a queue, driving or even while giving a presentation before a group. Such patients can be misdiagnosed as having narcolepsy.

In its most severe form, OSA can be life threatening, as it leaves the patient more vulnerable to accidents on the road or on the job. It has been linked to heart failure, systemic and pulmonary hypertension and stroke (Jenkinson et al, 2001).

Besides the obvious physical risks, OSA can lead to social isolation, problems with employees, marital troubles and depression. These problems, combined with the confusion and agitation that come from lack of sleep, can add up to a very troubled patient.

The most commonly prescribed treatment for OSA is weight reduction and CPAP (Continuous Positive Airway Pressure), an approach that is simple, effective, non-invasive, safe and reliable (Makker, 2001). With CPAP the patient wears a fitted mask connected to a machine that delivers a carefully adjusted stream of air pressure to keep the airway open, creating what amounts to a splint made of air.

However, CPAP is not for every patient. Long-term compliance is estimated to be about 70% (Fransson et al, 2003). Some patients such as Mr PM find that the mask induces claustrophobia. Others find the machine too noisy. A few experience adverse effects such as a dry throat, rhinorrhoea, facial irritation and, if the mask is worn incorrectly, ocular dryness. Some patients tend to swallow air, which may cause abdominal fullness and flatulence.

Other treatments for OSA include upper airway surgical procedures such as UPPP (uvulopalatopharyngoplasty), MMO (maxillomandibular osteotomy), which aim to increase oro-pharynx and hypo-pharynx diameter. The results of these procedures on snoring and sleep apnoea are variable and still present some debate.

Recently Mandibular Advancement Devices (MAD), have been shown to be used with some success for the treatment of OSA (Prathibha et al, 2003).
These devices are small plastic splints similar to an athlete's mouthguard. They are worn in the mouth during sleep to prevent the soft throat tissues from collapsing and obstructing the airways. They work by bringing the lower jaw forward, by holding the tongue forward, and by lifting a drooping soft palate, which creates more space for breathing. They are usually constructed in a maxillofacial department or specialist dentist, where they design, and fit to meet the patient's individual situation and condition.

Mandibular Advancement Device (MAD)

Un-moulded MAD

Moulded MAD

MAD placed in Mouth

In recent clinical studies, physicians and orthodontists have found that, in a majority of patients, a well made, well fitted MAD will effectively reduce or eliminate snoring, and significantly relieve symptoms of mild to moderate OSA (Fransson et al, 2003). The other advantage of such devices are that they are relatively easy to wear, small and are quiet, thus compliance rates are usually much higher than using a CPAP machine. They are relatively inexpensive compared to the cost of alternative treatments. Treatment with a MAD is also reversible and non-invasive.
Problems, which may be experienced, include aching jaw muscles, dry lips, tooth discomfort, noises in the jaw joint (TMJ), and excessive salivation. In general these side effects are mild and some can be relieved with simple painkillers.

When Mr. PM was fitted with one of these devices, an early check-up was performed to see if it was working, as short-term success usually predicts the long-term outcome. His device will be replaced periodically and adjusted when necessary by our maxillofacial department.

Mandibular advancement devices are not used routinely in all sleep centres at the moment even though the effects of these devices are well documented (Prathibha et al, 2003). CPAP is still the best treatment for OSA, but for those who are so discomforted by the machine that they cannot tolerate it, the MAD can be a viable substitution.

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MAKKER H. (2001) *Obstructive Sleep Apnoea Research* [online]. Available from http://www.uclh.org/services/thoracic/sleep_osaresearch.htm [Accessed 8 December 2003]

PRATHIBHA B, JAGGER R, SAUNDERS M, SMITH A. (2003) Use of a mandibular advancement device in obstructive sleep apnoea. *Journal of Oral Rehabilitation*, 30(5), pp.507.

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E-MAIL FORUM DIGEST

For the benefit of those members who do not yet have access to the E-mail forum (and why not?) here is a synopsis of some of the messages and discussions that have been 'posted' between 01/02/2004 and 24/03/2004....and what a mixed bag it was, even straying as far as the English rugby team demise against Ireland.

A few topics appeared several times one being the question of State Registration in particular the question of those who will not have 4 years experience when the state register opens but who commenced employment before the Degree course started (Christine ? & Joanne Johnson). Keith Butterfield replied that you would still be able to apply under the grand parenting clause which will remain an entry route for at least 2 years after the register transfers to HPC. As regards whether your degree will be accepted as an 'equivalent' qualification for the purposes of voluntary registration needs clarification on an individual basis. Contact the RCCP rep on julie.mcwilliam@sdah-tr.trent.nhs.uk.

Alex Perkins asked for some guidance on the background of field exercise tests and the predicted values for the 6 minute walk test. Adrian Kendrick recommended 'Clinical Exercise Testing' Vol 32, Eds - Weisman & Zeballos Pub by Karger 2002, whilst Andrew Collingwood suggested 'In Exercise Testing and Interpretation' by Cooper. Sue Revill stated that a good paper for the 6MWT was 'Six minute walking distance in healthy elderly subjects'. Eur Respir J 1999; 14: 270-274 and also mentioned that the ARTP handbook (part 2) would contain a detailed chapter on exercise tests : so get your orders in early.

Jason Viner requested help in setting up a re breathing method of measuring Transfer Factor in patients with low lung volume. Derek Cramer indicated that the Brompton had been routinely performing these tests, for about 15 years, on patients who have VC's as low as 0.4L. They published the work in 1989 (Lung Function testing & AIDS. Denison D, Cramer D & Hanson P. Respiratory Medicine, 1989;83;133-138). Whilst no predicted values are available they found that it was possible to apply a correlation factor to compare with the single breath technique (full details in the paper).

A degree of consternation arose with the publication of the COPD NICE Guidelines (available on the NICE website). Brendan Cooper, Adrian Kendrick, Alan Moore and Anglea Evans all expressed concern with various aspects of the document. Keith Butterfield pointed out that he had told everyone (or so he claims!) via the forum that the draft guidelines were available for comment and that once published NICE will not review the topic for some time. This highlights the need for all ARTP members to be more proactive. Following on from this Suzannah Blackwell asked for guidance in whether to use the new NICE guidelines for classification of COPD or stick with the BTS guidelines. The consensus seems to be that the NICE guidelines are only guidelines - they clearly are not correct and therefore not the final word - but we await a more detailed response from Adrian Kendrick.

Finally an interesting discussion arose after Kelly Backler asked for guidance as to how long to wait before performing PFT's on a patient post resolution of a pneumothorax. Both Adrian Kendrick (Effects of pneumothorax or pleural effusion on pulmonary function. Gilmartin JJ, Wright AJ, Gibson GJ.Thorax. 1985 Jan;40(1):60-5) and Alan Moore (Pneumomediastinum Following Spirometry. (Letter to the Editor) by Jane Krasnick : Chest, Sept, 2001) supplied useful references to the problem. Overall the consensus seems to be that since it is a relative contraindications the potential benefit of the procedure must be weighed against the clinical risk. As such physicians must make the assessment on an individual case basis and take full responsibility in a written confirmation. Generally speaking 6 – 8 weeks is normally sufficient for a routine case, however where the pneumothorax proves difficult to resolve, you need to wait a lot longer.


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Minutes of the Annual General Meeting held at the International Centre, Telford on 31st January 2004.

Executive members present (all present)

Dr Brendan Cooper (BC) Honorary Chairperson
Miss Julie Lloyd, (JL) Honorary Treasurer
Mrs Jane Caldwell, (JC) Honorary Secretary
Mr Keith Butterfield (KB) Vice Chair
Mr Nigel Clayton (NC)
Mrs Pat Mitchell (PM)
Mrs Angela Evans (AE)
Dr Adrian Kendrick (AK)
Dr Clare Newall (CN)
Mr Rod Lane (RL)
Mrs Jackie Hutchinson (JH) ARTP Administrator

One apology for absence was received from the membership from Brian Buick, Belfast.

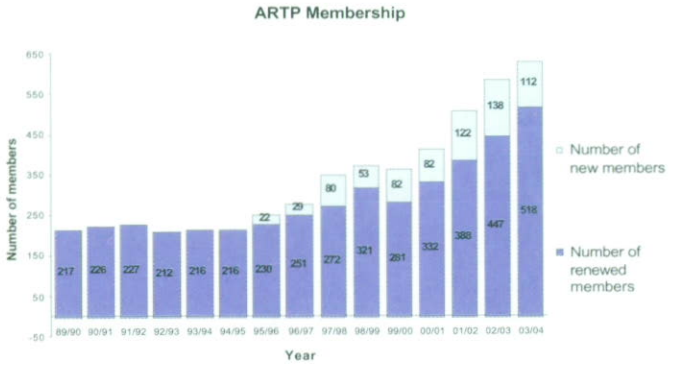
Dr Brendan Cooper welcomed the audience of approximately 200 delegates, to the 31st Annual General Meeting at the International Centre, Telford.
Telford town, named after Thomas Telford, had aptly provided this year's named conference theme "Building Bridges". The ARTP's achievements over the last year were reviewed and showed that many forms of "bridge building" had taken place over the last year amongst our own membership and particularly with our allied healthcare professionals, i.e.:

- BTS Liaison Group reformed (with tremendous strength & support from Chairman Dr Steven Spiro)
- ARTP/BTS interpretation course for SpR's held in Birmingham
- Lung function quiz at BTS Summer Meeting
- BLF/BTS Joint Statement on World COPD day
- Active participation at the British Meeting Point at ATS, Seattle, USA.
- Co-Enterprise Partnership business development ARTI/ARTP liaison with a superb Meeting in Dublin, Ireland, (special thanks to Geraldine Lawless)
- ARTP training Centre Training (HQ, meeting rooms, etc) ARTP Advisory Board - tremendous response from fellow Advisory SpecialistsARTP links with IPS, RCCP, FHCS, ACS, etcHealthcare Scientist Awareness Week
- Manufacturers' Liaison group two-way partnership support: meetings, this conferences' exhibition, 2004 proposed manufacturers surveyARTP Regional Groups National QA Scheme under way: leading towards Lab Accreditation (special thanks to Keith Butterfield, Rod Lane & all Regional Groups)

ARTP REPORTS:

Membership Report

The ARTP membership had rocketed in recent years with a 3-fold increase in 10 years, particularly since the 25th conference:



Membership must increase further to ensure that ARTP represents 95% of respiratory practitioners at HPC level. The reasons for the dramatic increase in members joining the ARTP were discussed and why this should continue: source for professional advice, training, leading on relevant national issues, accessible, friendly, helpful, stimulating arena for members.
The conferences had also increased both in delegate numbers and conference exhibitors, such that there are more exhibitors at this conference that at the 25th Conference at the ICC, Birmingham. Telford was chosen for this conference because it had to be the right size and cost and this would continue to be a high priority for the Executive Committee for future conferences.

Financial report

The financial turnover was stable, that the assets were growing, but as the ARTP is a charity we should be non-profit making. Therefore the Executive Committee has suggested a 3-year plan to develop an ARTP Centre to provide training, the ARTP Headquarters, with possibly some small meeting facilities, etc
There has been some changes in expenditure with decreases in Administration & Executive costs, despite increased activity all-round.
With respect to income there has been some changes in income, with increases in income from courses, and decreased income from handbook and national assessment fees.
Not included in the financial accounts, was a £7000 loss, which had been written off following legal advice. The loss was because of an alleged fraud unearthed against Universal Conference Consultants (UCC), who had organised some annual conferences in previous years. Legal advice was obtained from the Crown Prosecution Service, who stated that there was no case to prove, as it could have been classed as incompetence rather than fraud. If the ARTP had taken this further then an expensive civil case would have ensued and therefore the Committee have decided to write off the debt. This had not been discussed before because of the sub-judicial issue.
Brendan thanked **Julie Lloyd Treasurer, Jackie Hutchison, ARTP Administrator & all the EBS staff** for their direct input into maintaining the healthy state of finances.

The Membership were subsequently asked to vote to accept or reject the financial accounts which had been forwarded to the membership by post previously. **Majority accepted the financial accounts for 2002-3.**

Website Report

The ARTP website & forum provides the lifeblood of the ARTP being a valuable source for debate, discussion and information on key issues. The hits per month continue to grow and the forum membership has also increased There is a need for ARTP Forum membership to be increased further as this is vital as a source of important information and a public relations issue. Increased accessibility for forum members is also required. Website Links with other professional members will be developed to allow, for example the IPS, FHCS, DOH access to shared information, which will be in our own interest. The "members only section" will be developed over the coming year.
Brendan acknowledged **Keith Butterfield's** (ARTP Webmaster) direct role in providing and maintaining the ARTP website.

Scottish Forum financially stable

The Scottish forum group had has a very good year. They are financially stable, active, vibrant and responding to the Scottish Forum agenda for HCS. Thanks were expressed to the Scottish Forum Co-ordinator **Dr Roger Carter**, and **Christine Downie**, Scottish Forum Secretary.
The Scottish Forum's Annual General Meeting had taken place in Dundee, October 2003, which was very successful. He confirmed Glasgow would be used as centre for the national assessment in March of this year.

Education Report

The Educational Achievements for 2003 were reported to the members present, followed by the objectives for 2004. Special thanks were expressed to Educational Committee members **Angela Evans, Clare Newall, Trefor Watts and Adrian Kendrick.**

NOS	4 meetings Pilots conducted National trials in Spring 2004 Special thanks to all NOS Committee Members
College	Boards started
Exam Board	New Exam Format Feedback given to non-achievers Part1 & Part 2 Material Written 2003 National Assessment Completed
Education & Training	B.Sc. Specialist Option ratified (Westminster College, Swansea, Sunderland, Manchester, People's/DeMonfort, Wolverhampton

Courses Run in 2003

ARTP/BTS	Interpretation Course (Birmingham)
ARTP	Basic Sleep Course
ARTP	Advanced Sleep Course
ARTP	Lung Function Short Course (Birmingham & Glasgow)
ARTP	HTEC Specialist Option, (Coventry University)

Spirometry Courses- centrally coordinated/on website

Educational Objectives for 2004

NOS	Complete NOS Pilots in Spring 2004
College	Develop College Boards
Exam Board	Launch Part 2 for Exam in 2004 Liase with Universities & BTS re ARTP Exams Establish National Certificate (Part1 & Part 2) Improve Feedback (Assignments & Practicals)
Education & Training	Start S.O.P.s & Guidelines Begin Revision of 1994 Guidelines for 2004 Write Part 2 Guidelines

Courses to Run

ARTP	Basic Sleep Course
ARTP	Advanced Sleep Course
ARTP	Lung Function Course (Birmingham & Glasgow)
ARTP	HTEC Specialist Option, (Coventry University)
ARTP/BTS	Interpretation Course

Brendan then gave the results for the Part I National Assessments

BTS/ARTP National Assessment 2003

Outcomes

	2002	2003
Candidates registered	60	44
Completed and submitted assignments.	45 (75%)	
Entered the written /practical exam phase	36 (60%)	21 (47%)
Candidates achieved a pass.	24 (40%)	17 (39%)
Overall passes (beyond assignment phase)	(53%)	(81%)
Overall passes (% registered)	(40%)	(37%)

Parts One & Two- Integrated into B.Sc courses: assignments set by universities *exam set by universities. ARTP performs practical and vivas Exam questions and assignments results moderated by ARTP
(ARTP to run Part One/Two Support Courses)

The presentations of the Certificates for the BTS/ARTP National Assessment 2003 had taken place at the previous night's Gala dinner. (See separate article in Inspire for details of winners)

ARTP Constitutional Changes

Brendan confirmed that the Constitution of the ARTP had been revised and special thanks were expressed to the Sub-committee dealing with these changes, i.e. **Trefor Watts, Julie Lloyd and Jane Caldwell**. A summary of these changes, which had previously been circulated by post to the membership, was given.

Summary of Changes/Additions

Objectives	"To ensure competence to practice" added
Membership	Accredited membership Student membership clarified
Trustees	Extended to key roles on Exec Committee
Exec Comm.	6 proposed officers by Exec, voted by membership 3 and 2-year appointments for all Exec posts Education Sec. post becomes Vice-Chair of Education Appointment of external administration Simple majority vote – Chair to have casting vote

Brendan confirmed to the membership that a postal vote to accept or reject these changes had taken place and he reported that **Majority vote carried forward these constitutional changes.**
However, a couple of errors had been highlighted by members, regarding the omission of Executive roles, which would be amended and then re-circulated to the membership in due course.

At this stage of the AGM, **Keith Butterfield, Vice Chair of the ARTP**, addressed the membership regarding the re-election of the Chair of ARTP. Keith asked those members present to vote to accept or reject the re-election of Dr Brendan Cooper. A unanimous vote was received from the audience; with previously an additional further 56 postal votes. Hence a **unanimous vote to accept the re-election of Dr Brendan Cooper** as the Chair of ARTP for the next 3 years was obtained. Keith thanked Brendan for his inspiration and leadership and stated that the committee would look forward to working with Brendan to progress the ARTP over the next 3 years.

Brendan thanked all the Executive Committee members and the membership for their continued support. He reported that the current Executive team were a superb team to work with. He took the opportunity at this stage to particularly thank **Gill Butcher**, *(Burton)*, who had recently resigned as Inspire Editor and Bursary Secretary for her contributions she had given to the ARTP Executive over the many years she had been an Executive member. He also took this opportunity to thank the Executive Committee members on behalf of the membership.

The objectives of the ARTP over the past & coming year were briefly discussed (see later) Many achievements had been made and more would continue to be made on behalf of the membership.

To conclude the AGM, all were reminded of the fundamentals of respiratory physiology: basic physiology, optimal standards of practice and appropriate underpinning knowledge. He urged members, using the analogy of the "Building Bridges" theme, to actively take part and continue to build the structure of quality and experience, forming towers of quality measurement & quality assurance, whilst bridging the gap on theory and practice, protocol and patient care and standards and implementation.

Brendan concluded that he was proud to be the Chairman of the ARTP and would continue to strive to lead the Association with honour, over his last three-year term of office.

The AGM meeting closed at approximately 10 00am.

Minutes taken by Jane Caldwell, Honorary ARTP Secretary.

Objectives for 2003

Continued to assist the RCCP and to take forward as many ARTP members as possible to achieve provisional state registration (likely) in 2003. **(Provisional registration, Nov 2003)** **ACHIEVED**

Developed the College of Respiratory Physiology and the education materials and training in collaboration with the umbrella organisations for both Clinical Scientists and Clinical Physiologists within the ARTP.
(Supported Education Providers) **ACHIEVED**

Maintained and built upon a solid financial basis before this AGM and to invest ARTP funds in strategies that will benefit the membership now and in the future. **(ARTP Centre & Co-Enterprise Partnership)** **ACHIEVED**

Further developed Web site on the Internet to include technical reports on equipment **(NIV)**, and improved communication with members and non-members of ARTP
ACHIEVED

Strengthened links with manufacturers, agreeing roles and responsibilities and established regular meetings.
ACHIEVED

Continued to develop new course materials and resources for the National Examinations in Respiratory Physiology (Parts I and 2) before the next AGM 2004. **(ARTP Handbook Part One)** **ACHIEVED**

Promoted the National Examination in Respiratory Physiology and the National Examination in Spirometry and ensured that results are ratified and issued as early as possible. **(Joint ARTP/BTS/BLF Statement)** **ACHIEVED**

Further developed communications with Regional Groups throughout the UK, and facilitate this resource to support national initiatives such as NOS, examinations, etc.
(QA programme started) **ACHIEVED**

Developed and strengthened the partnership with the BTS, both through the re-launch of the **BTS/ARTP Liaison Committee**, the re-introduction of the **ARTP/BTS Interpretation Course** and the establishment of the **ARTP Advisory Board.** **ACHIEVED**

Re-written the **ARTP Constitution** to introduce an "Accredited" level of membership to bring us into line with other professional bodies in IPS.
ACHIEVED

Worked with other agencies to improve retention and recruitment within the profession **(DOH Chester Meeting)** **ACHIEVED**

Increased the **membership** of the ARTP towards >75% of practitioners of lung function measurement in the UK before this AGM 2004. **PARTIALLY ACHIEVED**

Objectives for 2004

Continue to assist the IPS & RCCP and to take forward as many ARTP members as possible to achieve full state registration with HPC

Develop the College of Respiratory Physiology and to publish ARTP Handbook (Part Two)

Maintain and develop a solid financial basis before next AGM and to explore development options for an ARTP Centre and a partnership with Co-Alliance Partnership.
Further develop ARTP Web-site and to increase ARTP Forum membership to be >90% of ARTP Membership.

Strengthen links with manufacturers and establish a manufacturers survey for lung function and related equipment providers before 2005.

Assist in the development of Job descriptions and to support ARTP members regarding the implementation of Agenda for Change

Promote the National Examination in Respiratory Physiology and to work with BTS and BLF establish the ARTP/BTS National Examination in Spirometry as the standard of practice in Spirometry throughout the NHS within 5 years.
Further develop communications with Regional Groups throughout the UK, and facilitate this resource to support national initiatives such as NOS, examinations, etc.

Set up Working Groups for Standards of Practice.

Minutes of the Heads of Department Meeting, on 29th January 2004 At the International Centre, Telford

Brendan Cooper, Chairman of the ARTP, welcomed approximately 110 delegates to the Telford Heads of Department (H of D) Meeting. He thanked the organisers for the meeting, reviewed the aims of the meeting and acknowledged the delegates attendance appreciating how difficult it was to leave busy departments. The importance that H of D's were informed about professional issues & major changes, was stressed.
(PowerPoint presentations from the meeting are available on the ARTP Website)

Brendan Cooper gave the first presentation: **Developing a Research & Development Strategy for the Lung Function Department**

The issues regarding the importance of R&D were outlined.
Potential departmental R & D activity was discussed

No questions were asked following this presentation.

The second presentation of the day was from **Pat Mitchell, Chief Physiologist, Aintree Hospital, Liverpool**, who gave an update on Physiological Measurements with respect to **Agenda for Change**

This presentation covered process so far of the A for C process at early implementer sites
Job Analysis Questions (JAQ) & Job Evaluations (JE) Profiles for bands 5, 6 & 7
ARTP Agenda for Change Working Party and tThe three grades of respiratory Practitioner.

Pat concluded her presentation by stressing what the H of D could do: encourage staff to joint the Membership of A.R.T.P. and register with RCCP. Become familiar with Agenda for Change Documentation and Job Evaluation Documentation (Available from Dept of Health Web Site, www.dohgov\agendaforchange).Produce up to date, modern job descriptions for self and staff, get involved with meetings and briefings; network with other MTO's in your trust, join Job matching panels and encourage and support staff to become involved.

Pat then took questions.

Nigel Clayton, Wythenshawe Hospital, asked if Pat felt that Agenda for Change would actually happen as forecast in Autumn 2004. Pat replied that her personal thoughts were that it would happen, but that all union members would be asked to vote for or against this motion possibly in June 2004.
Julie Lloyd, Good Hope Hospital, commented that ATO's might not be joining the ARTP membership, as the membership fee was the same rate as MTO grades, despite their lower levels of pay. It was agreed therefore that the ARTP Executive Committee should review the costs of ATO membership from the May 2004 renewal date.
Dena Muirhead, Derby asked whether encouragement to both Cardio & Respiratory professional bodies was recommended for ATO's working in both disciplines. **Adrian Kendrick**, Bristol, stated that the Executive might have to explore, along with the SCST, whether a discount rate could be arranged for joint membership.

Discussions then took place around the issue of grandfathering of members onto the voluntary registration and those members whom were entering the profession with degrees. **Gina Martin, Leeds** (RCCP ARTP Rep) stated that part of their degree might be used to fast track students through a clinical physiology degree, with credits for acquired prior learning (APL), but that the competency to become a registered practitioner was still 4 years experience, acquiring part I & II over the 4-year time span.
Paul Thomas, Llandough Hospital, asked Gina if someone who had both part I & II and a degree would be eligible to practice. Gina replied that it would depend upon the type of degree, as the clinical physiology degree was the recommended

degree for our profession. Relevant modules from other degrees taken, may exempt members from specific parts of the clinical physiology degree. Also the 4-year competency would still need to be met. **Brendan Cooper**, Birmingham stated that there were clearly areas which needed further work as the Clinical Scientist pathway was not as rigid, and this was a common issue across all the disciplines, including the Life Sciences & IPEM groups. Brendan Cooper concluded this session by emphasising that as H of D we should embrace Agenda for Change and get as involved as much as is feasibly possible.

Keith Butterfield, Dudley, Vice Chair of ARTP presented the next presentation on:

The Workforce Register & ARTP Surveys

This presentation covered:
DOH meeting at Chester in July to discuss projected HCS workforce needs.
Shortages forecast throughout the NHS in many of the skilled areas
(Further details in Inspire Article: Sept 2003; 5(3): 9)
Figures working in respiratory physiology previously unknown to DoH/WDC's now supplied from ARTP Survey Data.
Standardised collection of accurate data via the proposed Electronic Staff Record
Awareness of HCS's from HR Depts register and the RCCP & HPC registers.

Keith stressed that it was important that as H of D's we encourage and take part in HCS forums within our own Trusts, so that HCS representation is involved with local issues, service planning & delivery.

Keith then took questions from delegates:

Adrian Kendrick, Bristol stated that his Trust had a Committee with HCS representation and that in his opinion it had not been successful particularly when liasing with PCT's for additional funding to support new consultant posts. **Brendan Cooper, Birmingham** suggested that development of such liaison would take time, but that it was the best way forward.
Trefor Watts, Walsall, commented that presence of HCS on such committees would at least increase our overall profile.
Lesley Lowe, Wynthenshawe, asked if discussions had taken place with the BTS regarding this issue. **Brendan Cooper** stated that they had and to look out for a BTS Flyer titled **"How Many Blows Can Your Lung Function Department Take?"** which would be released in the near future.
Gina Martin, Leeds, stated that support from her colleagues at her trust was not an issue, but overspending on budgets prevented financial support being realised.

Keith then continued the second part of his presentation on ARTP Surveys:
This presentation covered: ARTP survey feedback

Further analysis of the data to support working groups and ARTP recommendations was needed. To conclude Keith stated that now that a database was established only updates would be required in the future. The BTS Directory of Laboratories is now generated by the data collected by this survey. To ensure correct & up to date information was produced the re-designed survey would take place in mid 2004.

Keith thanked all H of D's who had returned their survey forms to compile the 2003 survey.

One question was received from **Mike Nash, Wales,** regarding the BTS directory errors on lung function departments, which Keith stated emphasised the need for departments to complete the ARTP survey to ensure that the correct information was relayed for publication in the BTS Directory.

The next presentation on **National Occupational Standards, was given by Joanna Shakespeare, Birmingham QE.** Brendan Cooper took this opportunity to thank both Jo & Trefor Watts and all the NOS representatives for the tremendous amount of work and time that they had given to this project, which was gratefully acknowledged.

Jo acknowledged the input of the members on the **NOS Respiratory Group.**
This presentation covered the NOS Project remit with an update of what has taken place and anticipated time scales for deadlines of the project.

Questions from delegates included.

Brendan Cooper asked the audience if anyone was involved with piloting the standards as approximately 10 centres were needed throughout the country. He urged H of D's to contact their Human Resources dept to take part or the outcomes of the pilot study would rely wholly on QE Birmingham.

Gina Martin, Leeds asked what sort of involvement would it require from departments who participated. Jo suggested that three candidates from each centre should be involved and H of D delegate relevant paperwork to these candidates for completion. An assessor's qualification (D32 equivalent) could be obtained for assessors taking part in the pilot study, which might be an incentive to participate.

The morning sessions of the H of D meeting was concluded at this stage and Brendan Cooper expressed his thanks, on behalf of the delegates, to all the presenters.

Following the lunch break the afternoon sessions consisted of two breakout sessions, one for Physiologists and one for Clinical Scientists.

Trefor Watts, Walsall, gave the first Physiologists presentation of the afternoon, which was the ARTP Education Report. Trefor gave a review of the Education Achievements for 2003 followed by a review of the part I examination results for 2002 & 2003.

Trefor than took questions from delegates:
Barbara Thornely, Stockport, Cheshire, asked if Part I will run independent to the BSc degree next year. Trefor stated that this might be possible if there is the need for it (a raise of hands showed double figures requesting this be available).
Julie Mc William, Derby, asked if in a joint department can a practitioner do the Cardiology degree with the Part I assessment in respiratory? Trefor stated that the ARTP need to liase with SCST on this i.e. whether it is possible to major in one discipline & minor in another. **Jo Shakespeare Birmingham,** commented that competence to practice in each discipline required a level of achievement which was judged on obtaining Part I in both Cardio & Respiratory to be deemed

competent to practice. Trefor agreed that Part I would be needed in both but not necessarily Part II in both. **Geraldine O'Connell-Ramsey** enquired what the panel thought about teaching certificates being needed for qualified MTO posts. Trefor stated that he personally felt that higher-grade posts might benefit from having a teaching certificate but not necessarily the lower grade posts.

The next presentation was given by: Gina Martin, Leeds (ARTP RCCP Rep.)

This presentation covered:
Update of process of the Clinical Physiology petition
Current figures on voluntary RCCP register
Future HCS register (anticipated to take over possibly be early 2005)

As Only 11% of those registered are Respiratory physiologist, Gina took this opportunity to emphasise to the audience that it is vital that respiratory practitioners register ASAP.
Gina concluded her presentation by suggesting that H of D can help by getting onto the voluntary register ASAP to allow ease of transition onto the register of the HPC. Ensure that demonstration of both maintenance of practice and CPD is obtained and to only practice in areas in which you are competent to do so – safety for both staff and patients.

Questions were then taken from delegates. Questions asked from delegates included: Q. How many CPD units per year would be needed to maintain competency? *This is not known at this present time, as it has not been finalised yet.* Q. How many Respiratory Physiologists are on the register? *250, which has hardly increased over the last year!* Q. Will the title Clinical Physiology be protected? *It is hoped to be, but this has not be agreed as yet.* Q. What are the panel's thoughts on generic workers doing ECG's, Basic Spirometry etc.? *This was okay as long as their job description specified their limited roles of practice, they were appropriately trained and they didn't work beyond their limited role.*

Keith Butterfield thanked both Trefor and Gina for their very informative sessions and the clinical scientist group rejoined the physiology group at this stage.

The next presentation was given by **Ken Hutchinson, HR Director, Birmingham** titled: **Recruitment and Retention (R&R) - An HR Viewpoint**

This presentation covered:
NHS workforce growth
Staff recruitment & retention to meet its future requirements of NHS
Issues around the potential practicalities of the implementation for Agenda for Change Documentation

Questions taken from the delegates included:

Keith Butterfield, Wordsley, asked if Ken knew whether guidance would be given regarding what staff grades would be included in the JE Procedure. Ken stated that all volunteers from staff wishing to be involved in the process could register their interest, but that training would be given once selected to ensure continuity.
Trefor Watts, Walsall, asked if Trusts could implement A for C with local differences to other Trusts. Ken stated that there be unable to be significant differences but that there would need to be some local flexibility to address local issues. **Katrina Oates, Papworth,** commented that she was involved with this process currently and that it was a huge task & overall she felt that this was an inappropriate and dreadful system/process.

Brendan Cooper thanked Ken for attending the meeting and for enlightening the delegates from a different, HR prospective which had been most informative.

Brendan then introduced the final speaker for the day, **Professor Sue Hill, Department of Health** and his took this opportunity to thank Sue on behalf of the delegates for her relentless and incredible efforts she has given to promote HCS over the past year.

Sue gave an update of the:
Plan for Modernisation of the NHS
What HCS need to do to meet the changes ahead
How HCS have the ability to influence these changes via Trust / Organisational level, regionally at SHA / WDC and Nationally (DH and other agencies).
Sue concluded her presentation by encouraging all H of D to take an active part in the future development of the HCS in anyway that they could.

Questions were then taken from delegates:

Brendan Cooper commented that we should address the poor response on the RCCP register by increasing ARTP membership onto the RCCP and also look at membership rates for ATO's.
Dena Muirhead, Derby, commented that most H of D are registered and it is the H of D that are not present that need to be challenged regarding their RCCP registration. **Gina Martin Leeds,** also stated that this issue of RCCP registration was being addressed to the already converted. Sue responded by stating that the RCCP register was a matter of patient protection and therefore the D of H would possibly contact Chief Executives asking whether their Clinical Physiologists were registered on the RCCP register which might encourage applicants.

Amanda Salisbury, North Wales, stated that the BCS had held a workshop for members to attend to help complete their RCCP forms and asked if the ARTP had any future plans to provide this service. Brendan Cooper responded by stating if this would help then it may be provided, but that the **RCCP representatives Gina Martin and Julie McWilliam** were always available to help individuals with their applications.
Adrian Kendrick, Bristol, suggested that the D of H contact departments rather than HR departments but Sue replied that the HR departments would take issue with this if they felt it affected patient safety. **Gina Martin, Leeds,** asked if members would be sacked if they were not registered with RCCP particularly with R & R issues. Sue reiterated that Trusts would support issues that directly affected patient safety. **Jo Shakespeare, Birmingham,** suggested that the RCCP registration issue could be monitored by the regional groups, as these groups would cover all areas within their region, both ARTP members & non members. This would highlight those not registered. This was seen as an excellent suggestion, which RL & KB could pursue.

Brendan Cooper, Birmingham, asked Sue what her thoughts were on the Lack of Standards for practice, for example as seen recently with the Superdrug Spirometry assessments done by

non-qualified practitioners. Sue suggested that we as practitioners speak directly to these Health Care Professionals (& PCT's) and highlight the issues expressed, as they would not seek us out; it was our responsibility to state what level of standard is needed.
Linda Lukehurst, Liverpool, stated that at her Trust representation of HCS was via the Director of Nursing, and she wondered how she could raise the profile via other routes. Sue stated that HCS should be represented directly with an HCS representative at Trust level and to approach the Chief Executive directly to pursue this avenue further.

Brendan Cooper concluded the afternoon sessions by thanking all the speakers for their presentations and for the delegates' attendance to what had hopefully been an enlightening day's programme.

The H of D meeting closed and manufacturer's exhibition and workshops commenced along with the ARTP regional groups meeting.

Minutes written by Jane Caldwell, ARTP Honorary Secretary
Further information can be obtained by visiting the ARTP website at www.artp.org.uk were the H of D PowerPoint presentations can be accessed in the members only section ('Gallery').

Contraindications to Testing

By Kelly Backler, Clinical Physiologist, Papworth Hospital NHS Trust, Cambridge

In the 5½ years that I have worked at Papworth Hospital we have always used the Practical Handbook of Respiratory Function Testing (ARTP 1999) as our point of reference. We have been using the contraindications shown in the Handbook, Chapter 5 as our guideline for pneumothorax post operatively.

The following contraindications are listed in the ARTP handbook, Chapter 5 and from the Department of Health's Clinical Governance Web site: -

1. Haemoptosis of unknown origin
2. Recent Pneumothorax
3. Unstable Cardiovascular status
4. Recent Thoracic, abdominal or cerebral aneurysms
5. Recent eye surgery
6. Acute disorders affecting testing e.g. Nausea and vomiting
7. Recent thoracic or abdominal surgery

Risks V Benefits

On each individual case or in each individual patient group, within our hospital, different policies apply when patients with a known pneumothorax requiring spirometry.

Transplant patients and any post operative lung procedures tend to involve the insertion of a chest drain. This usually results in a small or large pneumothorax dependant on the procedure undertaken.
These patients have a clinical need to have their lung function performed post transplant/operatively to indicate improvements in lung function or in the case of transplant any early signs of rejection/infection.

Most of our patients who visit our Oncology Clinic have a Fibre Optic Bronchoscopy (FOB) as routine. This tends to results in a small post procedure pneumothorax from the biopsy needle. This would either be left to close or require an insertion of a chest drain.

The anesthetic department to assess patient viability for surgery uses spirometry values. We endeavor to perform spirometry pre FOB however this is not always feasible within a busy laboratory. Therefore some patients are referred post FOB by the Oncologists for lung function and as we believe there is a hypothetical risk we are unable to perform spirometry.
So how can you turn down Lung function testing on a patient who is due to have a surgical intervention?

This is usually the point where the Consultant agrees to take responsibility for any enlargement resulting from the lung function tests. This is an acceptable procedure at present, however as we are currently working towards State Registration, as Registered Practitioners we will be expected to take responsibility for our own actions and their consequences; even if the Consultant agrees to take full responsibility, we would still be liable.

Whilst searching various sites on the Internet I have found that there have been no clear studies to show whether a pneumothorax actually increases in size after performing spirometry. Few describe the hypothetical affect post pneumothorax stating that performing spirometry causes an increase in lung volume and pressure change in the alveolus, which results in alveolar rupture and air entry into the bronchovascular sheath.

Spirometry has been shown to be a good predictor for pneumothorax post surgery.

In conclusion, I suggest that until State Registration is implemented we should get our own consultants to write a letter authorising us to test patients with a pneumothorax if, they deem the benefits out weigh the risks.

Further studies must be undertaken to look into the risk of spirometry with pneumothorax and to assess how long should be left post resolution on x-ray before spirometry can be performed. Is it possible that the ethics committee would allow us to put a patient at risk to complete these studies?

ABSTRACTS FROM 2004 POSTER PRESENTATION ARTP CONFERENCE

THE STUDY OF RESPIRATORY FUNCTION OF SMOKERS & EXSMOKERS OVER THE AGE OF 40.

FRANCES BRADISH. CARDIORESPIRATORY DEPARTMENT, PILGRIM HOSPITAL, BOSTON, LINCS.

THE BRITISH THORACIC SOCIETY RECOMMEND SCREENING OF ALL INDIVIDUALS WHO ARE SMOKERS OVER THE AGE OF 40 FOR EVIDENCE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) (BTS 1997).

AIMS: THE AIMS OF THIS STUDY WERE TO SHOW SPIROMETRY SCREENING TO BE A USEFUL TOOL IN DIAGNOSING AIRFLOW OBSTRUCTION AND TO SEE IF SYMPTOMS ASSOCIATED WITH COPD COULD BE USED AS A PREDICTOR OF DISEASE.

METHOD: 107 PATIENTS WERE INVITED TO ATTEND FROM THE REGISTER OF A LOCAL GENERAL PRACTICE WHO WERE KNOWN SMOKERS OR EX SMOKERS. 57 PATIENTS ACTUALLY ATTENDED. THEY PERFORMED SPIROMETRY IN ACCORDANCE WITH ARTP/BTS GUIDELINES AND SELF COMPLETED A QUESTIONNAIRE ON SYMPTOMS AND SMOKING HISTORY.

RESULTS: 20 (35%) PATIENTS HAD ABNORMAL SPIROMETRY .15 (26%) WERE MILD COPD CASES, AND THESE WERE ALL NEWLY DIAGNOSED, 3 (5%) HAD MODERATE COPD, 1 (2%) HAD SEVERE COPD AND 1 (2%) HAD A RESTRICTIVE DEFECT. THE MODERATE CASES THAT WERE ON VARIOUS INHALERS HAD NO PREVIOUS OBJECTIVE LUNG FUNCTION ASSESSMENT. THE CORRELATION COEFFICIENT BETWEEN SYMPTOMS AND SPIROMETRY RESULTS WERE 0.343 - ALL SYMPTOMS, COUGH 0.163; EXCESSIVE SPUTUM 0.337; DYSPNOEA 0.265; CHEST ILLNESS AND ABNORMAL SPIROMETRY 0.102.

CONCLUSION: SPIROMETRY WAS SHOWN TO BE A USEFUL SCREENING TOOL FOR DETECTING EARLY COPD. SYMPTOMS WERE VARIABLE PARTICULARLY IN THE MILD CASES AND THERE WAS NO CORRELATION BETWEEN THEM AND SPIROMETRY OUTCOME.

1. BRITISH THORACIC SOCIETY (1997) GUIDELINES FOR THE MANAGEMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE.THORAX; 52:S1-28

IS IT NECESSARY TO USE A NOSE CLIP IN THE MEASUREMENT OF SPIROMETRY?

T. McCauley, B. Cooper. Queen Elizabeth Hospital, Birmingham.

The ARTP/ BTS guidelines state that when performing FEV_1 and FVC a nose clip is not required to obtain accurate values but do recommend the use of nose clips when performing a relaxed VC or when testing children and adolescents.

We investigated spirometric measurements in 25 consecutive patients (m = 13, f = 12) referred to the lung function department for routine tests. All patients undertook measurements of VC, FEV_1 and FVC using a wedge bellows spirometer (Model R, Vitalograph, Bucks, UK). Tests were performed in accordance with ARTP/ BTS guidelines in a randomised order with and without the use of a nose clip, by a qualified respiratory physiologist.

Results demonstrated statistically significant differences in FEV_1 (mean difference -0.03 +/- 0.02 l; $p>0.0001$), FVC (mean difference -0.09 +/- 0.17; $p= 0.01$) and VC (mean difference -0.15 +/- 0.23; $p= 0.06$) with greater values seen in those wearing nose clips. The mean difference in VC was greater than the 100ml reproducibility criteria recommended by the ARTP in 36% of patients studied. We conclude that the use of nose clips is recommended for the measurement of VC, only when performed by qualified and trained staff. The error in untrained operators is unknown.

AUDIT OF PATIENTS ATTENDING THE SLEEP CLINIC FOR DIAGNOSTIC EVALUATION

G. Lawless, V. Swan, Prof W. Mc Nicholas. Sleep Disorders Unit, St Vincent's University Hospital, Elm Park, Dublin 4

Between July 2002 and July 2003, 202 patients (35 females), who had overnight diagnostic sleep studies, were seen for evaluation in the outpatients department. The mean age and body mass index (BMI) of the group was 46.9 ± 12.1 (SD) years and 31.0 ± 6.0 Kg/m2 respectively. Over 90 % of the patients evaluated were referrals from GP surgeries. Two thirds (149) of the patients had limited sleep studies carried out, which recorded a mean apnoea hypopnoea index (AHI) of 22.9 ± 21.2. Similar mean values for AHI (20.9 ± 20.9) were obtained in the smaller group (n=53) who had overnight polysomnography tests performed. The mean Epworth Sleepiness Score (ESS) for the whole group was 10.7 ± 5.7, indicating a moderate degree of daytime sleepiness. When the sleep study data was evaluated in conjunction with the clinical history the following diagnostic decisions were reached. Over 50% (111/202) of patients choose a trial of nasal CPAP. A further 16% were referred to an Ear Nose and Throat (ENT) specialist for assessment first, with the option to try nasal CPAP at a later stage if necessary. 9% chose the mandibular advancement device (MAD), while 6% opted for conservative measures, including weight loss and lifestyle changes. Only 13% were considered negative for sleep apnoea syndrome (SAS) or any other respiratory sleep disorder and were referred back to their GP. In conclusion, the majority of referrals are from GP's indicating an increased awareness among general medical practitioners of SAS. Similar AHI and ESS scores were recorded in both the limited and full sleep study groups. Nasal CPAP therapy remains the treatment of choice for this syndrome in the patient population attending our sleep disorders unit.

Are health related quality of life (HRQoL) changes maintained after several years treatment with nasal continuous positive airway pressure (nCPAP)?

A. R. Proctor, J. Phillips, C. G. Billings, J. C. Waterhouse (Royal Hallamshire Hospital, Sheffield)

The dominant symptom of OSA is excessive daytime sleepiness (EDS) which has an significant impact on HRQoL, an increasingly important outcome in the evaluation of treatment. HRQoL (Short-Form 36 Health Survey questionnaire (SF36)) data from 33 patients (Group 1), prescribed CPAP for OSA, was analysed at three time points; before (T0) and after (T2) a home CPAP trial, and at routine follow-up (T52+). In addition long term follow-up data (T52+) was available for a group of established CPAP users (Group 2; n=79). Local normative data was available for comparison.

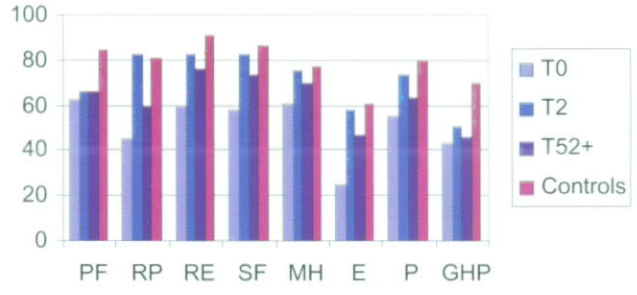


Figure 1: SF36 scores for OSA patients to Sheffield normals at T0, T2 and T52+ (n=33)

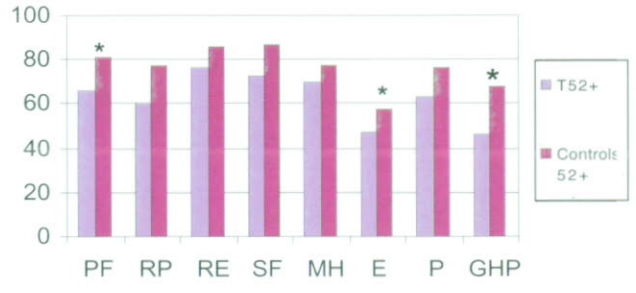


Figure 2: SF36 scores for OSA compared patients compared to Sheffield normals at T52+ (n=79)

Group 1 patients demonstrated significantly impaired HRQoL at T0 compared to matched local normals across all domains of the SF36. After a 2-week CPAP trial (T2), HRQoL was returned to local population levels. 19 months after treatment started (range 12-30 months) the improvement in HRQoL was maintained (figure1) and was similar to local population levels. Figure 2 shows that after 34 months of treatment HRQoL in Group 2 patients was not significantly different to the local population in 5 out of 8 domains of the SF36 (range 8-84 months).

We have shown that improvements in HRQoL following short clinical trials of CPAP are maintained, indicating that CPAP treatment is effective over a number of years.

HOME-BASED OXIMETRY SLEEP STUDIES USING THE POSTAL SERVICE

Laverty, A. Respiratory/Sleep Laboratory. Great Ormond Street Hospital for Children. London

Introduction: Ward-based cardiorespiratory sleep studies are increasingly in demand for children at this hospital. In order to reduce waiting times and to increase convenience for patients predominantly with previous, well-understood sleep studies ('follow-up' patients), we sent a small pulse oximeter in the post for the parent(s) to record 1-3 nights of overnight oximetry. The oximeter was returned via the post and the trend data downloaded to a PC.

Aims: To assess the viability of using the post to send/receive oximeters; to review the technical quality of the data recorded and to evaluate whether the outcome is satisfactory when compared to a ward-based study in well-understood sleep patients.

Methods: The parent/guardian of the child was contacted by telephone to confirm address and OK to send (e.g. not on holiday). The oximeter (Minolta Pulsox 3i) was set-up and tested, packaged and sent with Coban wrap tape, an instruction letter and a reply-paid envelope. The parents were asked to record for "1 or 2 nights" and to return the oximeter in the original packaging, with the reply-paid envelope attached. The date of request, the oximeter sent and received dates, and the durations of initial and any subsequent telephone calls were recorded.

Results: There were 60 studies completed between January 2002 and October 2003. 6 were new patients with the remainder follow-up (35 unique patients) and predominantly ENT/Respiratory diagnoses. Mean time of request to oximeter sent=44.6 days (SD=37.9), mean duration oximeters out=18.7 days (13.9) with a mean of 1.9 (1.0) studies recorded per send of which 7.8 (6.0) hours were 'successful'. Mean duration telephone time=2.3 minutes (1.8). Main reasons for request were: long waiting time, previous ward failures and follow-up assessment of intervention. Reasons for failure included batteries becoming dislodged in the post.

Conclusion: Home oximetry can be a convenient, useful tool for follow-up studies in patients with previously well-understood sleep studies, for assessment of interventions and for studying children who are sensitive to sleeping in a ward environment.

EFFECT OF ATOPY, ECZEMA AND RESPIRATORY SYMPTOMS ON PULMONARY FUNCTION IN THREE YEAR OLD CHILDREN.

L Lowe, BM Simpson, PM Kissen, A Woodcock, Adnan Custovic
North West Lung Research Centre, Wythenshawe Hospital, Manchester, UK

Background. The effect of allergic sensitisation, respiratory symptoms and eczema on lung function was investigated in 483 pre-school children enrolled in a prospective birth cohort study. **Methods.** At follow-up at 3 years of age a respiratory questionnaire was administered to the parents, children were examined for the presence of eczema and skin prick tests performed to 6 common allergens. Lung function was assessed by measurement of specific airway resistance (sRaw). A subgroup of children (n=188) was evaluated for atopy (skin prick tests at 1 year of age). **Results.** We used multivariate ANOVA modelling to investigate the effects of atopy, eczema and wheeze and the combinations of these factors on sRaw. Synergistic effects were explored by devising appropriate combinations of factors. There was a highly significant association between sRaw and different risk categories (p=<0.001). Results are listed in table below. Children atopic at age 1 and 3 had significantly poorer lung function (n=10, GM 1.34, 95%CI 1.13, 1.60) than those non-atopic at both time points (n=137, GM 1.11, 95%CI 1.08, 1.15), atopic only at 1 (n=11, GM 1.22, 95%CI 1.04, 1.43) or atopic only at 3 (n=30, GM 1.21, 95%CI 1.14,1.27, p=0.008, one way ANOVA). **Conclusion.** sRaw appeared to be increased in atopic children, with symptoms of allergic disease (eczema/wheeze) contributing to a further deterioration in lung function.. Children with early, persistent sensitisation were at particular risk for diminished lung function.

	n	sRaw (GM 95% CI)
No atopy, no wheeze, no eczema	178	1.03 (1.00, 1.06)
No atopy, no wheeze, eczema	55	1.09 (1.02, 1.16)
No atopy, wheeze, no eczema	102	1.13 (1.08, 1.17)
No atopy, wheeze, eczema	46	1.12 (1.04, 1.21)
Atopic, no wheeze, no eczema	30	1.09 (1.02, 1.17)
Atopic, wheeze, no eczema	15	1.12 (1.05, 1.20)
Atopic, eczema, no wheeze	29	1.21 (1.11, 1.32)
Atopic, wheeze, eczema	23	1.21 (1.09, 1.33)

COMPARISON OF AUTO-ADJUSTING AND FIXED POSITIVE AIRWAY PRESSURE THERAPY IN PATIENTS WITH MILD TO MODERATE OBSTRUCTIVE SLEEP APNOEA SYNDROME (OSAS)

G. Lawless, L. Doherty, P. Goodman, W. T. Mc Nicholas. Respiratory Sleep Disorders Unit, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland

Background: Continuous positive airway pressure (CPAP) is the therapy of choice for many patients with OSAS, but may be poorly tolerated in patients with mild to moderate disease. Auto-adjusting positive airway pressure (APAP) has been developed to constantly adapt the positive pressure to the optimal level and might be better tolerated. The aim of this study was to compare APAP and CPAP with regard to effects, patient preference and compliance in this category of disease.

Methods: 29 patients (mean age 53 yrs) with polysomnography confirmed mild to moderate OSAS (apnoea/hypopnoea freq/hr [AHI] 5-30) were given 8 weeks of laboratory determined fixed level CPAP and 8 weeks of APAP in a randomised, blinded, crossover trial. Data are given as, mean ± SD, APAP v CPAP.

Results: No differences were observed in the AHI (2.8 ± 3 v 3.5 ± 3.5), or subjective daytime sleepiness as measured by the Epworth score (ESS; 8.6 ± 4 v 7.7 ± 4.6) between the two modes, all values were significantly improved from baseline (AHI 14.7 ± 8, ESS 12.3 ± 4; p< 0.001). Patient compliance and duration of use were similar with both treatments. However, mean APAP pressure was significantly lower than CPAP pressure (6.2 ± 1.4 v 8.4 ± 1.7 cmH2O, p<0.001). There was a statistically significant proportion of patients requiring higher fixed pressures (>8cm H2O) who preferred APAP, while those requiring lower pressures (<8cm H2O) preferred CPAP after trial completion.

Conclusion: APAP and CPAP are equally effective in improving sleep-related breathing disturbances and daytime sleepiness in patients with mild to moderate OSAS.

A COMPARISON OF EXHALED NITIRIC OXIDE ANALYSERS IN HEALTHY SUBJECTS, ASTHMA AND COPD PATIENTS

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Introduction: Measurement of exhaled nitric oxide (FeNO) is an established technique for the detection of airway inflammation. Several manufacturers produce analysers for this purpose. Aim: To compare FeNO using 3 different analysers.

Methods: 10 non-smoking healthy subjects (mean FEV1 3.49), 10 non-smoking asthma patients (mean FEV1 2.88) and 10 ex-smoking COPD patients (mean FEV1 1.91), underwent repeated measurements of FeNO at a flow rate of 50ml/sec on each of the analysers Eco Medics (E), Aerocrine (N) and Logan (L), in a random order. Results: The table shows; (a) mean values and (b) Ratio of N and L readings relative to E (E-rel).

	Means (SD)			E-rel	
	E	N	L	N	L
HV	17.2 (9.8)	28.8 (16.6)	36.2 (22.9)	1.67	2.10
Asthma	38.0 (35.6)	61.7 (59.6)	81.4 (82.5)	1.62	2.14
COPD	16.9 (8.8)	25.1 (14.1)	34.3 (21.4)	1.49	2.03

Correlation coefficients between different machine were all >0.8.

Conclusions: Despite giving consistently different readings, the FeNO values from the different analysers showed a high degree of correlation. Furthermore, the ratio of values obtained from the 3 analysers was similar in the 3 subject groups. This data can be used when comparing values obtained from studies using different analysers, in the research setting.

EFFECT OF CAT AND DOG OWNERSHIP IN EARLY LIFE ON RESPIRATORY SYMPTOMS, ATOPY AND PULMONARY FUNCTION AT AGE THREE YEARS

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Background. The effect of pet ownership on the development of sensitisation and asthma is unclear. In a large prospective birth cohort study we investigated the effect of pet ownership in early life on sensitisation, respiratory symptoms and lung function in 444 children (158 with pets).
Methods. At the 3 year follow-up a respiratory questionnaire was administered to the parents (n=444), children were skin prick tested, n=402) and lung function assessed by specific airway resistance (sRaw, n=285).
Results. Prevalence of atopy did not differ between pet owners and those without pets (15.2% vs 22.4%, p=0.09). Sensitisation to cat was significantly more common in cat owners than in those without pets (11.5% vs 4.5%, p=0.02), but cat ownership had no effect on atopy (20.7% vs 19.6%, p=0.88). The prevalence of sensitisation to dog was no different in dog owners compared to those without pets (2.7% vs 6.4%, p=0.28) However atopy was significantly less common in dog owners than in those without pets (9.6% vs 22.1%, p=0.02). Asthma was diagnosed in 18 (11.0%) children who owned a pet and 35 (11.8%) of those without a pet. Cat ownership had no effect on prevalence of wheeze. Wheeze ever and recent wheeze were significantly more common among dog owners (wheeze ever 34.5% vs 53.2%, p = 0.003, recent wheeze 17.8 vs 31.6%, p=0.008). There was no difference in sRaw between children without pets (n=191; GM 1.07, 95% CI 1.04,1.10) and those with a cat (n=48; GM 1.04, 95% CI 0.98,1.10 p=0.32), a dog (n = 46; GM 1.07, 95% CI 1.04,1.09 p=0.76) or both cat and dog (n=10; GM 1.06, 95% CI 0.95,1.17 p=0.80).
Conclusion. The effects of cat and dog ownership were different. Cat ownership was associated with **increased** risk of sensitisation to cat, but had **no effect** on respiratory symptoms or lung function. Dog ownership was associated with **decreased** risk of atopy, but **increased** risk of wheeze, and **no effect** on lung function.

BURSARY REPORT - ERS CONFERENCE VIENNA 2003

By K E Oates

When I got out of bed at 2.15 am, my body thought that my mind had finally flipped. Whilst this is debatable, the real reason was that I was booked on a flight to Vienna that departed at 6:30am and Heathrow is over an hour from my flat.

The Flight was quite pleasant, made all the more enjoyable by a bacon butty and a double helping of Disney cartoons. I couldn't cope with very much more at that time in a morning. When we arrived it was easy to see why Midge had the urge to sing about Ahh Vienna. What a beautiful city. What a beautiful day.

In the evening we went to an evening do. I was amazed to discover that this years number of delegates topped 13,000. It was an education to learn about the eminent professors who had earned awards for their contributions to respiratory medicine. This coupled with some impressive Mozart and Strauss made for an enjoyable evening. This was concluded by a trip to a local watering hole. Nice.

On Sunday I woke before the alarm. I felt very smug in that I could spend an extra ½ hour tucked up. Unfortunately my bubble was burst as I realised I had forgotten to add the extra hour to my clock and in fact, I was running late.

I got to the conference just in time for the start of the Cough symposium. It always amazes me how heated delegates get at conferences. This one was bound to be good in the wake of the Major Charles Ingram "millionaire" scandal. It's great that people feel so passionate about their work. It's also very entertaining.

One thing I'm never prepared for is the magnitude of the exhibition hall. It's massive. There's a whole host of magnificent stands offering a wealth of freebie post – its, pens and knick-knacks. Then there's the swarm of delegates jostling around with "symbicort" bags. The consultants are the worst. It really is a sight.

The whole week was packed with superb poster sessions, symposia and meetings. I have an active interest in exercise physiology so it was fascinating listening to eminent scientists such as Professor Brian Whipp speaking with such enthusiasm about this subject.

On the Monday I had my poster presentation. I have been lucky enough to present a few posters but I can truly say, this was the best. I was presenting some work that looked at how perception of workload determined work patterns in hospital porters and cleaners. The response was great and I left the session feeling on top of the world.

In essence the conference was wonderful. I learned so much. It's not just the science, it's the whole package. I met so many people and made so many contacts. I was there with Arlene Jackson. We had so many ideas for research and general developments. On our return to Papworth, we gradually began to act on our ideas. Now we are starting to see some results. We have generated a new ATO post, were successful in submitting a bid to buy an impulse oscillometer and are now applying for a research grants. The most crucial thing I learned from the ERS was that if you have the vision and the drive, the results can be pretty impressive.

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