



“ Tricks or Treats???”

Editors Welcome

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As always, the eXhale newsletter has many treats for you this month although please forgive the delay in publishing this month. As I'm sure many of you will agree, the work load for all is increasing and therefore we are trying to make the same amount of time available in any day stretch to allow for larger numbers of task to be performed.

In future the aim is to get the newsletter out every 6 weeks due to increasing workloads. This will also give others a better chance of contributing to the newsletter. I have worked out all the dates between now and next year so will aim to stick to them, but you know the old saying about the plans of men.....(or in this case wo-man).

As can be seen from the contents of the newsletter, a lot of work is happening currently behind the scenes to not only to improve lung function standards on a national level but also on an international level. With many professional bodies working together, this will allow the standardisation of respiratory physiology on a global level. The article on WOLFAP and the website detailing this project makes for fascinating reading.

Also, I can not recommend strongly enough that the BSc students take full advantage of the comprehensive guide to student projects, kindly written by Adrian Kendrick. It is an easy to follow piece which will guide all students through the minefield that is ethics. This really is a must read guide to all those who are hoping to begin, and hopefully complete, their projects.

This week of course is Halloween. Hopefully most of you are in for more treats than tricks as winter, swine flu and exacerbations come rolling through the door. But, like the well trained individuals we are what ever hocus pocus we need to perform and what every hubble, bubble, toil and trouble walks through the door, we will address like the dedicated scientists we are.



First Class Honours for a First Class Student

Congratulations go to Karen Lewis-Jones from Stepping Hill Hospital, Stockport who gained first class honours in the Clinical Physiology degree at Manchester Metropolitan University this year. Karen picked up the prize for outstanding student of the year. A big thank you to nSpire Health for sponsoring the prize.



Karen receiving her prize from Dr Verity Hick

WOLFAP; World Lung Function Accreditation Project

The WOLFAP was inaugurated at the ARTP Conference in Glasgow 2007, by a group of experienced, senior lung function experts. The key aim of the meeting was to determine a way forward to produce an international lung function assessment process that would become a benchmark accreditation for all laboratories around the world.

This is a huge undertaking by all those involved and will impact on all respiratory specialists as the study develops.

They have published a website which details, comprehensively, what the group are hoping to achieve and how they intend to do it. As this project reaches fruition, it has the potential to be incredibly influential on our every day work.

<http://www.lungfunction.org/wolfap.html>

ARTP et. al. set standards for Primary Care

The ARTP, GPIAG and Education for Health bodies have collaborated together to publish standards for spirometry for use in Primary Care, which have now been published in the Primary Care respiratory journal.

These are good, comprehensive guidelines which can guide our primary care colleagues. Of course, they do not replace the need for good training. They are clear, concise and reader friendly.

These guidelines are available free to download from;

http://www.thepcrj.org/journ/vol18/18_3_130_147.pdf

Below, is the abstract:

“ Primary care spirometry services can be provided by trained primary care staff, peripatetic specialist services, or through referral to hospital-based or laboratory spirometry. The first of these options is the focus of this Standards Document. It aims to provide detailed information for clinicians, managers and healthcare commissioners on the key areas of quality required for diagnostic spirometry in primary care – including training requirements and quality assurance. These proposals and recommendations are designed to raise the standard of spirometry and respiratory diagnosis in primary care and to provide the impetus for debate, improvement and maintenance of quality for diagnostic (rather than screening) spirometry performed in primary care. This document should therefore challenge current performance and should constitute an inspirational guide for delivery of this service. ”

Levy, M., Quanjer, P, Booker, R, Cooper, B., Holmes, S. and Small T. (September 2009)
Diagnostic Spirometry in Primary Care: Proposed standards for general practice compliant with American Thoracic Society and European Respiratory Society recommendations **The Primary Care Respiratory Journal**. Volume 18 Issue 3 Pages 130-147

COPD Day Update : Milton Keynes

As COPD draws nearer, most departments are getting ready to either host their own event or become involved with events occurring near by.

Here in Milton Keynes, we are holding our own event. The plan is to perform opportunistic spirometry on people who are travelling into the hospital that day. We have launched a media campaign, advertising to local people that they can have a free “lung test” on November 18th.

In addition to spirometry, we have teamed up with the PCT smoking cessation advisors who are going to offer smoking cessation advice to people and we are going to educate people about COPD.

Top secret: but we are trying to convince members of the local football team to attend also to encourage publicity and people.

The day looks to be organised chaos, but we are hoping for a fun, informative day for people who may be at risk of COPD.

We want to hear your stories of COPD day. Please send details of your events to;

eXhale@artp.org.uk



REMINDER!!



ARTP ANNUAL CONFERENCE 2010

28th – 30th January 2010

Park Inn Hotel, Heathrow

Registration fees (accommodation extra)

	<i>Early full delegate</i>	<i>Late full delegate</i>	<i>Thurs Only</i>	<i>Fri Only (incl gala dinner)</i>	<i>Fri only (excl gala dinner)</i>	<i>Sat only</i>
<i>ARTP Member</i>	<i>£170</i>	<i>£200*</i>	<i>£80</i>	<i>£110</i>	<i>£80</i>	<i>£40</i>
<i>Non-Member</i>	<i>£215</i>	<i>£245*</i>	<i>£125</i>	<i>£185</i>	<i>£125</i>	<i>£50</i>
<i>ARTP Student Member</i>	<i>£140</i>	<i>£170*</i>	<i>£60</i>	<i>£100</i>	<i>£60</i>	<i>£30</i>
<i>Student Non-Member (early and late includes ARTP Membership up to 1/5/10)</i>	<i>£170</i>	<i>£200*</i>	<i>£90</i>	<i>£130</i>	<i>£80</i>	<i>£40</i>

*** Late registration supplement applies to registrations received after 31/12/09**

Conference programme includes:

- o Theme – “Flying Higher & Higher”
- o 2 Sleep Plenary Sessions including “OSA or OSAS – Who Is Fit to Drive” by Professor John Stradling
- o Interesting, educational and entertaining view of exercise including talks by Dr John Carlisle, Mr Joseph Marzouk and Dr Sandy Jack
- o Don't forget the date for Abstract submissions is **30th October 2009**.
- o Each accepted Abstract lead author will receive a £50 voucher to be used towards ARTP Courses and Conferences
- o Authors chosen to give a spoken presentation will receive a £100 voucher to be used towards ARTP Courses and Conferences
- o The best poster, regardless of category, will also receive a special prize awarded during the Gala Dinner
- o Get your “thinking caps” on as we are looking for nominations for the ARTP Awards for Services to Respiratory Measurement.
- o 2 awards presented – one to a medic or physiologist/scientist; the other to a physiologist/scientist
- o Don't forget nominations should include why this person is nominated and should be supported by two other ARTP members from outside the nominator's department.

SEND IN YOUR REGISTRATION FORMS WITHOUT DELAY TO AVOID DISAPPOINTMENT!!!

Recurring Grants

The commitment to an article for *Inspire* before or after the event is a requirement for application.

Approval for grants is via the ARTP Executive Committee.

Meetings Deadline for Travel Grants

BTS Summer Meeting	(2 @ £250)	1st April
ERS Meeting	(3 @ £400)	1st June
BTS Winter meeting	(2 @ £250)	1st October
ARTP Conference Grants	(10 @ £250)	1 st December

A **Travel Grant Application Form** which contains more details can be downloaded from the website.

ARTP members who have received educational grants in the past are listed on the website.

Enquiries about bursary applications should be directed to: travelgrant@artp.org.uk or the ARTP Administrator

ARTP Course Grants

Additional funding in the form of TEN bursaries of 25% of the course fee are available to attend the ARTP Courses.

For more details see the education page on the ARTP website.

With the start of the new academic year, students entering either Y3 or Y4 will need to be undertaking a research dissertation which forms a significant component of the Y4 module. Your HEI will be providing you with information through lectures and course work on research methods and how to undertake research. These modules are essential for the students to get to grips with the processes involved.

However the research dissertation will need to be undertaken within your own department and hence your Trust. Research has now become very complex process with many hoops to jump through, but taking some simple steps will enable each student to successfully complete a project to the required standard. The ARTP are producing a guide to undertaking the project and this will be published on the ARTP website shortly.

There are essentially four choices of type of research project –

1. Systematic Review

A systematic review is a summary of research that uses requires a thorough literature search and critical appraisal of individual studies to identify the valid and applicable evidence. It often, but not always, uses statistical techniques ([meta-analysis](#)) to combine these valid studies, or at least uses grading of the levels of evidence depending on the methodology used.

- a) Formulating the problem – *what's your question?*
- b) Locating and selecting studies – *literature search (PubMed)*
- c) Critical appraisal of studies – *how good are the studies*
- d) Collecting data – *what data can you get from each study*
- e) Analyzing and presenting results – *Relating the data to your question*
- f) Interpreting results – *how do the studies answer your question?*

The choice of question is one that should interest you and be relevant.

2. Service Evaluation

This type of study utilizes data that is already currently available i.e. has been collected as part of standard clinical practice and can then be re-analysed to determine the answer to specific questions. From the perspective of what you are going to be doing, you simply have to be able to access data already obtained, which may be test data on a one off basis, test data before and after a clinical intervention decided by a doctor as part of standard management of that patient i.e. before and after a bronchodilator.

The key things about this type of study is that it does not require ethics approval, the data already exist and you can easily analyze the data. You do need to choose sensible questions that are relevant to clinical practice.

3. **Clinical Audit**

This may or may not be regarded as research, but for the purposes of a BSc dissertation, your HEI may agree to permit this.

It is defined as "a [quality improvement](#) process that seeks to improve patient care and outcomes through systematic review of care against explicit [criteria](#) and the implementation of change".

4. **Research**

Research can be defined to be search for knowledge or any systematic investigation to establish facts. The important thing is that it is an attempt to derive generalisable new knowledge, including studies that aim to generate hypotheses, as well as studies that aim to test them.

Generally, research follows a structural [process](#). Though step order may vary depending on the subject matter and researcher, the following steps are usually part of most formal research -

- a) Formation of the topic
- b) [Hypothesis](#)
- c) [Conceptual definitions](#)
- d) [Operational definition](#)
- e) Gathering of [data](#)
- f) Analysis of data
- g) Test, revising of hypothesis
- h) Conclusion, iteration if necessary

The type of research may also be important and can be either

- a) **Quantitative** – designed to test a hypothesis and may involve evaluating or comparing interventions, particularly new ones and where the study design may require allocating patients to intervention groups.
- b) **Qualitative** – identifies/explores themes following established methodology and usually involves studying how interventions and relationships are experienced using a clearly defined sampling framework underpinned by conceptual or theoretical justifications.

There are a large number of issues involved in undertaking research in the NHS today and to this extent, whilst this may be the more relevant approach to understanding the research process it is by far the most difficult and time consuming process.

Research requires ethical approval. This requires –

1. Writing your protocol justify everything you need to do within the study

2. Getting sponsorship either from your Trust or from an external organization which requires internal reviewing, rewriting of protocols and agreement from the Trust for you to undertake the research on their premises
3. Completing Patient Information Forms
4. Completing an extensive 50+ page on-line form
5. Attending an ethics committee review where your study will be either passed with flying colours (very very rare!!!) or get torn to shreds with extensive, over-zealous nit-picking and effectively will require a complete rewrite!
6. Resubmit project for further review by the ethics committee – if they agree to allow you to do this
7. Once you have ethics approval, and the Trust has given you final written agreement to commence the study – you may begin

This is just the start and once you have permission to undertake the project, your need to be very careful over its conduct, how you collect data, how you record the data, where it is recorded, how long it is kept for etc.

Overall, whilst research is by far an exciting and enjoyable experience, with a great deal of satisfaction, the whole process now is really beyond the remit of students unless your HoD and WBS are prepared to spend a lot of time on the project. Effectively to complete steps 1 to 7 above, can take months to complete. If you really want to go down this route, start at the beginning of Y3 and expect to start your project towards the end of Y3 – if you are lucky!

There is an alternative – if you can piggy-back onto a project already being undertaken within your department, you might be able to persuade the researchers to allow you access to some of the data which you can then analyze and draw conclusions about. This will require the lead researcher to seek an ethics committee amendment to the project and if they agree and the Trust agrees you can then commence the project. This reduces the time scale significantly, but is still time consuming.

Conclusions: - Whichever route you go down to complete your dissertation you need to start early in Y3 and get the ball rolling. Leaving things to the last minute simply does not work anymore in the current NHS. You will find further information on the ARTP website shortly in a much more extensive article and review of the subject aimed at the student, WBS and HoD

Good Luck and Enjoy

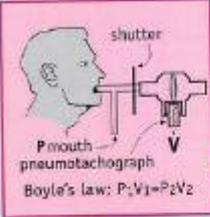
Adrian H Kendrick

Chair – ARTP Research Committee

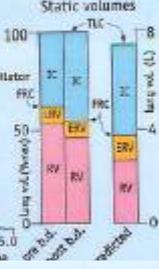
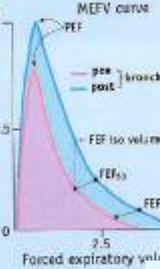
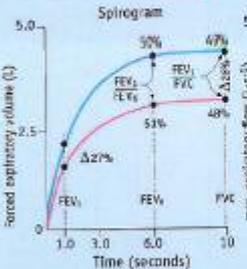
a new book

JMB HUGHES

Physiology and Practice of Pulmonary Function



P box



6 minute walk test (6)



Foreword: Neil Pride
Illustrator: Doig Simmonds

Published by the Association for Respiratory Technology & Physiology



PHOTO: DS

Professor Mike Hughes

Emeritus Professor of Thoracic Medicine Hammersmith Hospital campus, and at National Heart and Lung Institute (NHLI), Imperial College, London. Mike Hughes trained with John West, Jere Mead and Moran Campbell, and was a colleague of Neil Pride at Hammersmith Hospital from 1969 to 1996. His clinical and research interests are pulmonary physiology, lung function, gas exchange, the pulmonary circulation and radioisotope studies.

This book describes the patho-physiology of the respiratory system. It explains the physiological basis of adult lung function tests and their application in Clinical Medicine.

There are 18 chapters (323 pp), 87 tables, and 79 specially prepared figures (27 in colour). Topics covered include:

- Spirometry and maximum expiratory flow.
 - Bronchial challenges.
 - Lung volume and airway resistance.
 - Respiratory muscles.
 - Transfer factor [TlCO, KCO].
 - PaO₂, SaO₂, PaCO₂, pH: respiratory failure: O₂ therapy
 - Exercise (field and laboratory tests).
 - Breathlessness and breathing control.
 - Sleep disordered breathing; non-invasive ventilation.
 - Pulmonary function in Obstructive, Restrictive and Vascular diseases.
- Sections on Reference values, Interpretation of results, Good laboratory practice, Health and Safety and Education and Training give guidance for those working in, or supervising, Pulmonary Function Laboratories.*

Neil Pride is Emeritus Professor at Hammersmith and Royal Brompton Hospitals, and at NHLI Imperial College, and past President of the British Thoracic Society. He has a world-wide reputation for his work in respiratory mechanics and COPD.

Doig Simmonds: retired Head of Medical Illustration at Hammersmith Hospital, he has written several books on computer graphics for presentations and publications in medicine. He has cooperated with Mike Hughes on two previous books.

Association for Respiratory Technology and Physiology

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Available from: www.artp.org.uk
admin@artp.org.uk
0845 226 3062 or 0121 355 2420

Special Price of
£19.95 for ARTP
members and 24.95
for non members



The perfect sound track for COPD Day

- The Air that I breathe - The Hollies
- Every breath you take - The Police
- Living on a prayer - Bon Jovi
- Knockin' on Heaven's Door - Guns 'n' Roses
- No air - Jordan Sparks and Chris Jordan
- Breathe in Breathe Out - Mat Kearney
- Hurt - Johnny Cash
- Born to Run - Bruce Springsteen
- Down with the Sickness - Disturbed
- Run to the Hills - Iron Maiden
- Scar Tissue - Red Hot Chili Peppers
- Caught in a trap - Elvis Presley
- Total Eclipse of the Heart - Bonnie Tyler
- Breathe in Me - Micaheal W. Smith
- Breathe - Sugar Ray

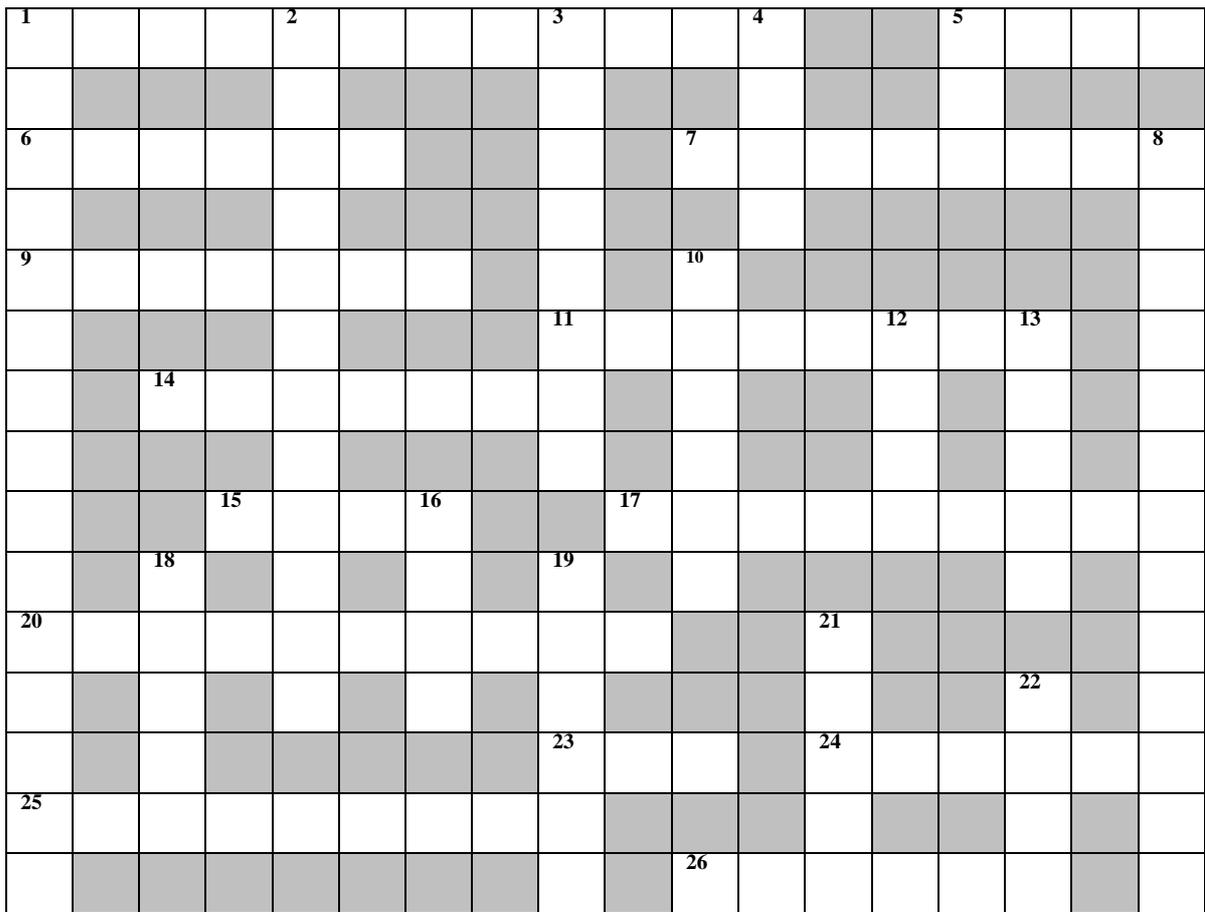
Web links from this issue

CSO Conference	www.cso2009.co.uk/
World COPD Day	www.goldcopd.com/WCDIndex.asp
Association of Clinical Scientists	www.assclinsci.org
European Respiratory Society	www.ersnet.org
Health Professions Council	www.hpc-uk.org
Department of Health	www.dh.gov.uk
British Thoracic Society	www.brit-thoracic.org.uk
British Lung Foundation	www.lunguk.org
WOLFAP	www.lungfunction.org/wolfap
Primary care respiratory journal	www.thepcrj.org/journ/vol18

Forthcoming ARTP Education and Events

- | | | |
|-------------------------------|---|-------------|
| • SPIROMETRY | Nov 23 rd & 24 th | Brompton |
| • CSO Conference | Nov 24 th & 25 th | London |
| • BTS 2009 –Winter Meeting | Dec 2 nd & 4 th | Westminster |
| • ARTP Annual Conference 2010 | Jan 28 th -30 th | Heathrow |

Crossword



Across

1	Can occur spontaneously? (12)
5	This type of cell may be found on a boat (4)
6	Too much, hyper (6)
7	See 15 across (8)
9	Relating to the liver (7)
11	The lungs live in this cavity(8)
14	A noisy asthmatic?(7)
15 (and 7 across and 22 down)	A disease for lovers of pigeons and budgies droppings and blooming dust (4,8,4)
17	Can be <i>Jet</i> or <i>Ultrasonic</i> (9)
20	A type of arthritis, that can affect the lungs (10)
23	Conductance (abbr) (3)
24	Can be affected by pressure, ask Boyle(6)
25	Released from 5 across (9)
26	Reflex that can occur in the bronchi walls, the first half of this reflex is a bit fishy.(6)

Down

1	Described by Menzies in 1796 (15)
2	A form of cancer caused by exposure to asbestos (12)
3	Non-invasive determination of oxygen levels (8)
4	A form of electromagnetic radiation with a wavelength in the region of 10 to 0.01 nanometres(1,3)
5	Made up of a canister, metering valve and actuator (abbr) (3)
8	A sweet way to investigate mucociliary clearance(9,4)
10	The Physiologist <i>made</i> me do this spirometry! (6)
12	A dust that may caused pneumoconiosis (4)
13	Pirates keep their treasure in this (and also their lungs) (5)
16	Collected during a research study, hopefully good quality (4)
18	Can occur in divers on the way up (5)
19	Cilia are sometimes compared to this digit (6)
21	Also called Pyrexia, from a Greek word meaning fire.(5)
22	See 15 across(4)

The prize crossword from September has been rolled over, due to postal strikes etc. Please can completed entries for the **Intermedical crossword** be sent to Kimberley Jenkins, Exhale Editor, eXhale@artp.org.uk by **25th November 2009** Entries can also be snail mailed (or posted) to Kimberley Jenkins, Lead Respiratory Physiologist, Ward 14, Milton Keynes NHS Foundation Trust, Eaglestone, Milton Keynes, BS16 3SN.

If other companies would like to sponsor future puzzles, please contact eXhale@artp.org.uk

Please include your name, and contact details. Entrants must be paid up ARTP members and not on the ARTP Editorial committee.

The winner will be drawn at random on 30th November **2009** and the winner notified.

www.artp.org.uk

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