ARTP Survey 2005

In August 2005 we conducted the ARTP Survey to update the information last collected about respiratory physiology services in 2003. The data collected at that time has proved invaluable in helping us in our work representing the profession at a national level.

It has been used to inform decision makers such as the Department of Health and the Workforce Numbers Advisory Board and ensure that realistic data is being used in many situations, for example, in calculating the number of training posts funded nationally and estimating the current diagnostic capacity of the NHS. These figures are not available from any other central source in the UK. The data collected in the survey is also used to compile the British Thoracic Society directory of laboratories. It is the most robust and reliable up to date data currently available about the respiratory physiology workforce in the UK.

The survey collected data on the department, staffing, equipment and procedures performed (including workload and waiting times) giving a comprehensive view of respiratory testing services throughout the UK. In this article some of the main findings are delivered but the database will be used to answer questions as they arise. Given the reliability of self reporting data, it is assumed at the outset that any shift of greater than 5% is likely to be a significant change throughout this paper.

Survey History and Sample Size

A survey in 2002, mainly conducted by fax and phone, provided the basis for the original survey database but this only polled labs in England and Wales and only asked about a limited list of procedures. This data was built on for the 2003 survey to incorporate the whole of the United Kingdom however this only achieved a 61% response rate and the response was better from single speciality (ie respiratory only) labs compared with 'multi-disciplinary' labs so the data from 2003 needs to be viewed as having a bias towards these respiratory labs. However, due to the diligent pursuit of non-responders by ARTP Administration staff we managed to achieve a 91% return rate for the 2005 survey with a representative and balanced sample from each of the different lab types making this the best (and only) source for this information (See Table 1).

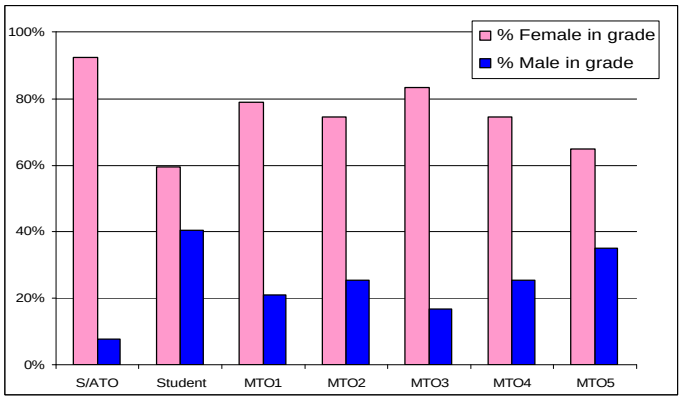
Table 1: Reponses and Lab Types

Survey	Responding / Total Labs	Overall Response Rate	Lab Type		
			Resp	Multi-Disp	Specialist
2002	203 / 203	(100%)			
2003	152 / 248	(61%)	54%	38%	8%
2005	229 / 253	(91%)	49%	45%	6%

Staffing

The clinical physiology profession has a female majority (76.8% female, 23.2% male) showing a slight swing from 2003 (81.5% female, 18.5% male). Within the MTO grades there has been a definite change at MTO5 level from 57% male to the current 65% female while there has been an increase in the recruitment of males at training grades since 1995 which is now beginning to be reflected in the middle qualified grades. There are still relatively more males at the higher grades than basic grades, which could be due to a loss of female staff at middle grades to career breaks? This could reflect an opportunity for recruiting staff to return to practice rather than having to train new staff. (Graph 1).

Graph 1: Gender vs MTO Grades 2005



There are 29 Clinical Scientist (CS) posts; 7 grade A, 11 grade B and 11 grade C (though only 21.2 whole time equivalents). This is a confusing figure as there are currently no official CS training posts (grade A) in respiratory which needs further investigation, especially as this is now a protected title under the Health Professions Council so should not be being used by anyone not registered on the training scheme. It should be noted that Clinical Scientists have not been included in the majority of the staffing analysis.

Table 2 shows the numbers of posts and whole time equivalents (wte) reported as working in respiratory physiology. It is important to recognise the causes for the differences. There may be some respiratory physiologists who are working part time and some of the lead roles in large departments require that only part of the duties are for the respiratory department. However, the majority of the differences will be due to

physiologists working in multi-disciplinary departments where part of their workload will be in another discipline (eg cardiology).

There appears to be a shift towards an increase in higher grade posts while, over the same time, an overall decrease in whole time equivalents.

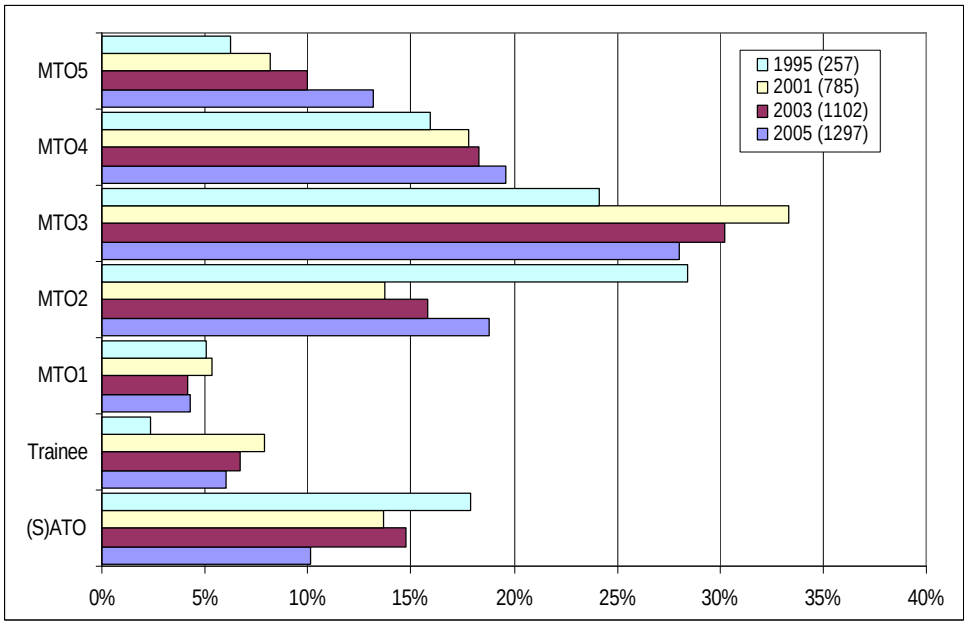
Table 2: Grades and Posts 2005 vs 2003

Grade	Posts	Change from 2003	WTE	Change from 2003
(S)ATO	194	(↑ 28)	97.1	(↓ 15)
Trainee	79	(↑ 3)	56.9	(↓ 6)
MTO1	61	(↑ 9)	39	(↑ 2)
MTO2	88	(↑ 6)	152.4	(↑ 7)
MTO3	355	(↑ 11)	226.2	(↓ 42)
MTO4	240	(↑ 36)	158	(↓ 18)
MTO5	145	(↑ 38)	101.7	(↑ 5)
Total	1297	(↑164)	856.5	(↓ 45)

Points to bear in mind when looking at these figures:

- The wte was obviously misreported to some extent in 2003 as it was noticed on the returns that some multi-disciplinary departments reported high staffing levels performing respiratory as 1 wte while the workload figures declared for the department did not justify the level of staffing.
- There was a better response rate to this survey which probably captured more staff.
- There was a better response from multi-disciplinary departments this time and we know that better funding and recruitment initiatives (aided by cardiology NSF's) has boosted grades within cardiology departments.

Graph 2: Relative Proportions of Grades 1995 to 2005



Graph 2 charts the changes in the proportions of each grade in each survey year showing a general increase in higher grades over the period surveyed. In recent years the proportion of training grades seems to have slightly decreased however, due to inability to recruit in some areas, some trainees have been placed on the MTO2 scale which may explain some of the increase in that grade. Perhaps surprisingly there seems to have been a fall in the proportion of Senior ATO's and ATO's.

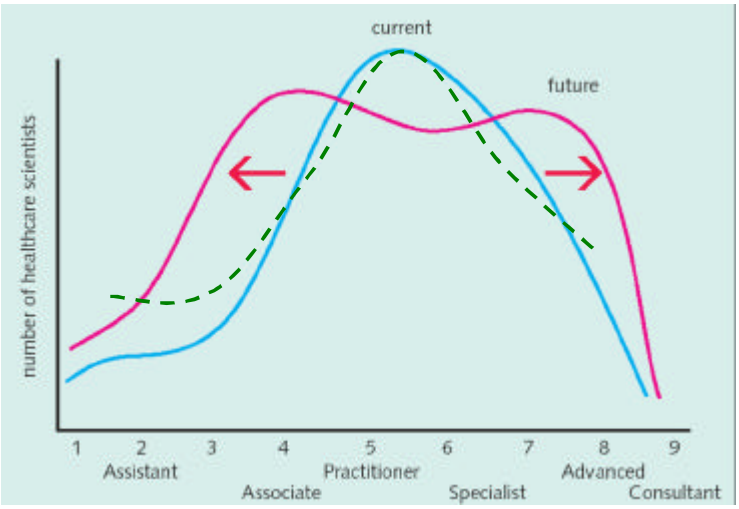
The Department of Health's Healthcare Scientist Careers Framework published in November 2005 suggests the following key projected changes for the future:

a) the need for more skills and competences to be transferred to assistants and associates.

b) the creation of more advanced and consultant level posts to support the scientific and technological advancement of healthcare and new roles at the medical scientific interface.

c) the need for scientific workforce numbers to increase.

Graph 3: Respiratory Grades compared to HCS Workforce Profile



The profile of the respiratory physiologist workforce from the survey (green dotted line in Graph 3) matches the DH's '*current*' profile reasonably well. This assumes it is valid to map current MTO3 to Career Pathway Stage 5, ATO's to Stage 2, SATO's to Stage 3 and MTO5 to Stage 8. It is however difficult to determine whether the vertical position of this line means that we either have the correct number of basic grade practitioners (in which case we already have a high proportion of assistants) or if we have the correct number of assistants (and therefore low numbers across all the other grades).

If the workforce is intended to conform to the 'future' model consideration is required as to which of the basic/specialist grade skills could be cascaded to associates or assistants, without compromising the quality or safety of patients, which haven't already been devolved by recent efficiency drives. Also, with an increase in advanced grades, where do the trained personnel to replace the advanced specialists come from? The only source would seem to be fast-tracked practitioners or associates who may lack the clinical experience.

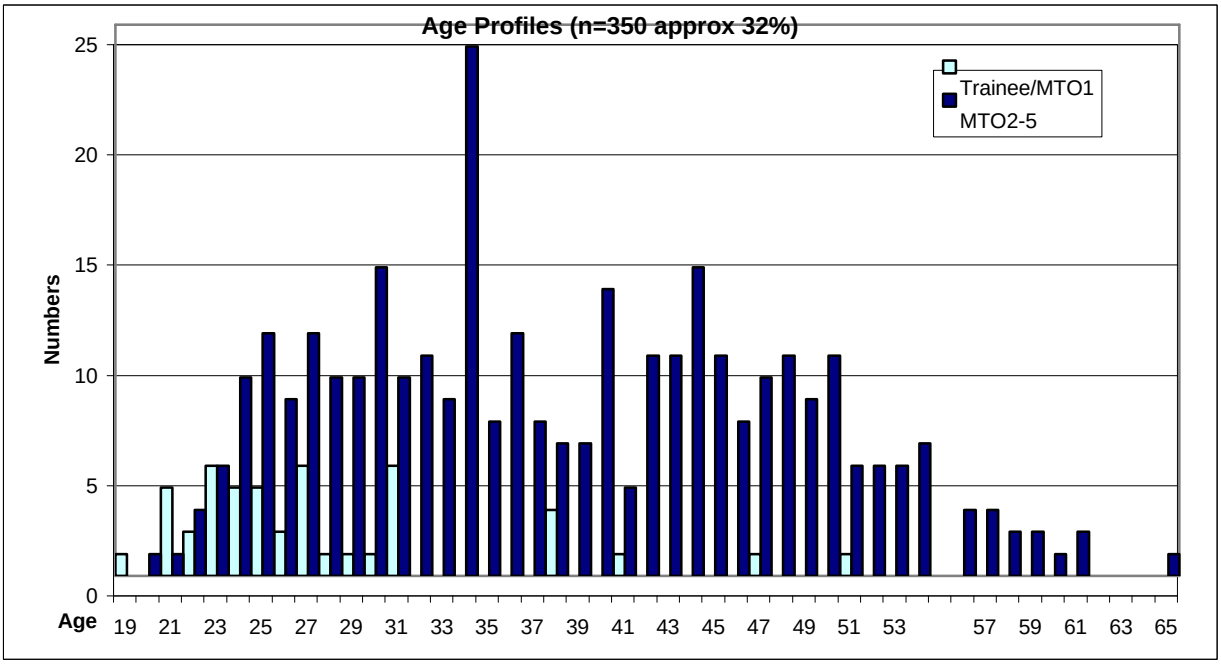
Experience information was only supplied for 288 physiologists however this gives a general picture of the experience and duration spent in each of the grades (Table 3).

Table 3: Experience

Grade	Experience (Average years)
SATO	**7.2**
MTO1	**3.3**
MTO2	**6.0**
MTO3	**10.6**
MTO4	**16.3**
MTO5	**20.2**

The ages of only 32% (310) of the MTO grades were reported giving a rough idea of the age profile of the workforce. When looking at this information it needs to be taken into consideration that it could be skewed by sections of the population being sensitive about their ages. If the data do reflect the workforce it would seem that there is a fairly even spread of people in the qualified grades across the 25 to 50 age range with a relatively small proportion within 5 years of retirement.

Graph 4: Age Profile of the Workforce



The student grades show an older student population than might be expected. This may reflect anecdotal opinion that recently many students come to the profession already having done some form of higher education, often a degree in associated subjects like biological or sports sciences. There are also some considerably older people in these training grades though these may be people performing a limited range of procedures rather than mature students.

This age information is valuable for workforce planning but the limited sample size makes it difficult to draw unequivocal conclusions.

Equipment

The survey asked for information about the equipment in use in lung function laboratories which is summarised in Table 4. There was better reporting of equipment than in the 2003 survey so we probably have a reasonable picture of the relative market share for each of the manufacturers. The three larger companies have retained fairly similar proportions of the market and, whereas in 2003 the other companies were grouped under a single 'other' category, Medisoft equipment has increased its market share enough to warrant a separate entry.

Vitalograph still hold the significant majority of the laboratory market for spirometers with Micromedical apparently increasing their share however in 2003 only about half as many spirometers were reported so the earlier data may not have been reliable.

The oximeter data shows that the Minolta Pulsox 3i is by far the favourite oximeter reported in the survey however this was only from a sample of 256 oximeters and several of the labs reported having several Minolta oximeters in their inventory.

Table 4: Equipment

Full [n= 450 (↑73)]		Change since 2003
Ferraris/Morgan	39%	(↓1%)
Jaeger	29%	(↓1%)
Sensormedics	23%	(↑1%)
Medisoft	5%	
Medgraphic	1%	
Unknown	3%	
Spirometry [n= 463 (↑222)]		
Vitalograph	76%	(↓1%)
Micromedical	15%	(↑4%)
Other	9%	(↑3%)
Oximeters [n= 256]		
Minolta (Pulsox 3i/A)	69%	
Ohmeda	18%	
Nellcor	9%	
Other	4%	

Procedures - Availability

Table 5 shows the estimated availability of some of the common (and some less common) respiratory procedures.

Table 5: Availability

	Availability	(2003)		Availability	(2003)
Full PFTs	**97%**	**(97%)**	**6 MWT**	**71%**	**(63%)**
Spiro in OPD	**92%**	**(83%)**	**ISWT**	**47%**	**(36%)**
Spiro in Labs	**98%**	**(100%)**	**BLE**	**66%**	**(69%)**
Direct Access Spiro	**33%**	**-**	**CPET**	**32%**	**(32%)**
Long Term O2 Therapy	**62%**	**(51%)**	**ABG**	**52%**	**(40%)**
Ambulatory O2 Therapy	**53%**	**-**	**Capillary BG**	**40%**	**(34%)**
Hypoxic Challenge (flight)	**47%**	**(38%)**	**Transcutaneous BG**	**29%**	**(24%)**
Bronchial Challenge	**52%**	**(50%)**			
Overnight Oximetry	**82%**	**(79%)**	**Pulmonary Rehab.**	**56%**	**(39%)**
Sleep less than 5 Ch.	**49%**	**(54%)**	**Spiro Training for PC**	**67%**	**-**
Sleep more than 5 Ch.	**39%**	**(35%)**	**Spiro in Community**	**26%**	**-**
Polysomnography	**15%**	**(13%)**			
Oscillometry	**9%**	**(7%)**	**CPAP Trials**	**62%**	**-**
Exhaled Nitric Oxide	**11%**	**(9%)**	**CPAP Loans**	**62%**	**(50%)**
Hyperventilation Studies	**20%**	**(19%)**	**Neb Loans**	**73%**	**(69%)**

CPET = cardio-pulmonary exercise test; BLE = bronchial lability exercise; ABG = arterial blood gas; ISWT = incremental shuttle walk test; PC = primary care; 6MWT = 6 minute walk test.

The above figures show availability as a percentage of responders. It would be inappropriate to extrapolate the national availability of these procedures from these figures because there were poor return rates on some individual procedures. For example, Ambulatory Oxygen Assessments were reported to be available by 53% of responders, however as only half the survey returns confirmed the availability of this test we can only be sure that it is available in 27% of the laboratories nationally. There are similar discrepancies in the reporting of CPAP, Nebuliser and external spirometry services.

Indeed while 97% of responders report full tests are available we can only confirm this for 87% nationally though we do know that there are some departments that only deliver a simple spirometry service. Hence, because the non-responders are likely to be the 'less interested' departments, the national availability of each procedure is likely to be lower than the figure reported in table 5.

While also reiterating caution in the interpretation of figures from the 2003 due to a less complete response rate the following observations can be made;

The apparently illogical availability of spirometry in only 98% of labs (surely a respiratory lab by definition must at least offer spirometry!), and that its availability has fallen from 100% in 2003, can be explained by having 'discovered' more laboratories that were not included in the 2003 survey and not managing to elicit a response to the survey from some of them. This demonstrates some of the tolerance that has to be applied to these figures.

The measurement of blood gases is increasing (particularly Arterial Blood Gases). This is not surprising considering the increasing demand for LTOT assessments and also a rise in Hypoxic Challenge testing. Radial ABG's are increasingly being performed by clinical physiologists, this has particularly been driven by the need to transfer workload to satisfy the junior doctors hours problem. ARTP introduced and ran several ABG courses in 2005 to address a high demand for training.

The use of walk tests (6 minute walk and incremental shuttle) is rising which may tie in with Pulmonary Rehabilitation and the imminent implementation of the new domicillary oxygen service which requires walk tests for Ambulatory Oxygen Assessments. The actual availability of these latter 2 procedures is surprisingly high considering the national funding issues. There is currently variable provision of ambulatory oxygen around the country (now being addressed under the new contract) however commissioning of assessment services to back up the implementation of the national contracts is lagging behind. Pulmonary rehabilitation, despite the NICE guideline stating that it should be available, is another service that is struggling to acquire proper funding and it might be that those centres reporting its availability are only able to provide it for a limited number of patients.

The sleep study data can be interpreted as showing little change in the types of sleep investigations but the number of departments offering CPAP loans would appear to have risen despite the national problems with lack of funding for this treatment. Changes in practice, a competitive CPAP market, patient purchase and creative funding may explain this trend. However, it does not reflect the unmet increasing demand for diagnosis and treatment caused by the lack of adequate investment by the NHS.

Spirometry training for PCT's is occurring in two thirds of responding departments (at least 40% nationally). ARTP now has 37 accredited training centres delivering training courses around the country and is working with other training providers to standardise the national level of training. This demonstrates our commitment to support the development of clinical measurement skills in primary care.

Spirometry in the community is being provided by a quarter of responders (at least 15% nationally) and direct access spirometry by a third (at least 20%). This information was not previously polled in 2003 so there is no reference data to support an increase in primary care spirometry activity but this has obviously been driven by the demand for spirometry data being included as part of the Quality Outcome Framework (QOF) in the primary care General Medical Services (GMS) contract.

Procedures – Activity

Table 6 shows the levels of activity for the more common procedures. Activity has to be viewed as a function of both numbers of procedures performed and the waiting time for the test; if a service is working at full capacity its waiting time has to increase to accommodate extra referrals. A long waiting time may actually result in a reduction of referrals and clinically inappropriate treatment or monitoring of a patients condition.

The data are not normally distributed because there are such a wide variety of department types included in the survey, from the single person cardio respiratory department performing PFT's less then daily to large specialist centres. The Median and Inter-Quartile Range (IQR) gives an idea of the spread of the data, while the mean and the availability gives us, for the first time, the opportunity to estimate the national capacity.

Generally waiting times for most procedures do not seem too bad in the current climate but will still need to be improved to address the 2 week diagnostic time required to meet the 18 week referral to treatment target proposed for 2008.

Unsurprisingly, the waiting times that are of most concern relate to sleep investigations and CPAP treatment. However there is now some firm data to back up the arguments. Waiting times for sleep studies are (from

Table 6: Activity

		Number Of Procedures Per Month					Waiting Times (weeks)				
	Availability	Max	Mean	Median	IQR	n=	Max	Mean	Median	IQR	n=
Full PFTs	89%	710	104.2	79	(40-129)	172	26	4.5	3.5	(2-5)	166
Spiro in OPD	82%	1004	121.8	80	(35-160)	174	-	-	-	-	-
Spiro in Labs	90%	230	25.6	8	(2.8-20)	40	18	2.8	2	(1-4)	150
Direct Access Spiro	20%	200	35.6	10	(8-45)	23	36	4.8	2	(1-4)	24
Long Term O2 Therapy	55%	30	8.6	6	(4-10)	71	18	3.2	3	(1-4)	59
Ambulatory O2 Therapy	27%	18	2.6	2	(1-3.5)	27	18	2.6	2	(1-3.5)	27
Hypoxic Challenge (flight)	42%	20	3.2	2	(1-4)	87	12	3.0	2	(1-4)	80
Bronchial Challenge	46%	20	3.2	2	(1-4)	87	16	4.0	4	(2-6)	81
CPAP Trials	34%	64	14.4	12.5	(6.5-19)	55	32	8.2	6	(3-12)	49
Overnight Oximetry	64%	160	21.3	14	(5-30)	125	104	4.4	2	(0-4)	118
Sleep less than 5 Ch.	42%	88	15.3	14	(4.5-20)	63	156	9.2	5	(2-8)	61
Sleep more than 5 Ch.	34%	92	16.4	15	(6-20)	58	156	13.1	7	(4-15)	56
Polysomnography	13%	40	10.8	5.5	(4-19)	24	78	14.9	10	(5-22)	22
6 MWT	64%	220	9.5	2	(1-4)	37	25	3.1	2.5	(0-4)	91
ISWT	41%	15	5.4	4	(2-9)	17	18	2.8	2	(0.3-4)	46
BLE	58%	71	3.4	1	(1-3)	109	25	3.6	3	(2-4)	102
CPET	29%	50	8.3	4	(1.5-16)	57	25	4.6	4	(2-6)	55
CPAP Loans	41%	-	-	-	-	60	300	17.5	6	(1.2-12.5)	55
Neb Loans	55%	-	-	-	-	76	8	1.1	1.7	(0-2)	59

**Availability in this table is the likely percentage of 253 labs performing each procedure extrapolated from the 91% response rate*

January 2006) being monitored by the Department of Health. Access to CPAP treatment has, at last, been referred to NICE for consideration for a technology appraisal.

Grades Performing Procedures

Departments were asked to specify the minimum grade of staff performing each procedure in their department and the summary of this information is presented as Table 7. Clinical Scientists have not been included in this staffing analysis and will be considered in a separate report.

The right hand column shows the sample size for each procedure and should be taken into consideration when viewing these figures, for example it seems that large proportions of staff across several grades perform Full Polysomnography but this is only because the procedure is not common and there are only a few of each grade.

It is clear that the majority of 'routine' PFT procedures are performed by MTO2 grades but it is interesting that there 5% (n=6) hospitals where a medic appears to perform the outpatient spirometry so they presumably do not have technical or nursing support for this task. It also raises a question about the level of formal training in spirometry that these medics might have received. It is now unlikely that medics receive the same level of training in spirometry that both ARTP & BTS would recommend for any practitioner?

Sleep Studies and the more complex procedures generally warrant higher grades with nursing staff performing a proportion of the CPAP, and other trials and assessments. Physiotherapists get involved with the NIV, muscle training and especially pulmonary rehabilitation whereas not many clinical physiologists do.

The grade that performs the procedure may also be dictated by the staffing of the department. So in a small single-handed department there may only be one person to perform the procedure and in the 'old' MTO grading system, where duties were not linked to grade anomalies could, and did, arise where someone may be very competent to perform a procedure but local cost pressures had suppressed the practitioner getting

the appropriate grade for the complexity of their work. Under Agenda for Change this, theoretically, should be addressed and it will be interesting to see how this table changes in future surveys.

Another factor that is likely to change the shape of this table is the aforementioned changes to careers pathways promoting the cascading of skills. This is already becoming apparent in Arterial Blood Gas Sampling where currently the duty is split roughly 3 ways between physiologist grades, nurses and medics. A few years ago the physiologist proportion would have been much lower and, as already discussed with the introduction of home oxygen assessment services and a possible increase in hypoxic challenge testing, we are likely to see this task being passed over to physiologists even more to free medical staff time.

Conclusion

We now have the most comprehensive data ever collected about the state of respiratory diagnostic departments. The data from the 2003 proved invaluable when working with other interested parties such as the Department of Health and the Workforce Numbers Advisory Board to inform the national agenda and with the changes to the national diagnostic framework and healthcare scientist careers pathways it will again prove extremely useful supporting the ARTP executive in representing the interests of our members, our patients and the service as a whole.

This document will be published in *Inspire* and circulated to interested parties (eg Chief Scientific Officer and Department of Health Physiological Measurement Group, British Thoracic Society, Federation for Healthcare Science).

Any comments or enquiries concerning the ARTP Survey should be directed to Keith Butterfield, Vice Chair, ARTP (email: vicechair@artp.org.uk).

Table 7: Minimum Grades Performing Procedures

Procedure	ATO	SATO	MTO1	MTO2	MTO3	MTO4	MTO5	Nurse	Physio	Medic	n=
Spirometry/Flow Volume Curves in PFT Labs	16.3%	7.5%	9.5%	**30.6%**	18.4%	7.5%	2.7%	6.1%	0.7%	0.7%	**147**
Reversibility (in PFT Labs)	14.0%	4.0%	18.0%	**38.0%**	14.0%	8.0%	2.0%			2.0%	**50**
Spirometry/Flow Volume Curves in Outpatient Depts	**22.7%**	5.0%	10.1%	16.8%	13.4%	5.0%	0.8%	**21.0%**		5.0%	**119**
Reversibility (in Outpatient Depts)	**25.8%**	3.2%	12.9%	**29.0%**	9.7%	9.7%		3.2%		6.5%	**31**
'Full' PFT's (Spiro + Transfer + Lung Volumes)	0.7%	4.5%	8.2%	**42.5%**	28.4%	10.4%	0.7%	3.7%		0.7%	**134**
Lung Volumes by Body Plethysmography		1.4%	5.4%	**47.3%**	31.1%	8.1%	1.4%	5.4%			**74**
Lung Volumes by Gas Dilution Methods		4.0%	7.9%	**39.7%**	28.6%	11.1%	2.4%	4.8%	0.8%	0.8%	**126**
Airways Resistance by Body Plethysmography			3.1%	**50.0%**	32.8%	7.8%	1.6%	4.7%			**64**
Lung Compliance by Body Plethysmography				39.1%	**43.5%**	13.0%		4.3%			**23**
Impulse Oscillometry			9.5%	**47.6%**	9.5%	19.0%	4.8%	9.5%			**21**
Mouth Pressures (MIPs/MEPs)	1.1%	2.2%	5.4%	**38.7%**	33.3%	11.8%	4.3%	3.2%			**93**
Exhaled Nitric Oxide	5.0%		5.0%	20.0%	**30.0%**	15.0%	5.0%	10.0%		10.0%	**20**
Oxygen Saturation by Oximetry ('Spot')	17.6%	5.6%	11.2%	**25.6%**	17.6%	5.6%	1.6%	13.6%		1.6%	**125**
Ear Lobe Capillary Blood Gas Sampling	7.1%	3.6%	7.1%	**28.6%**	**25.0%**	12.5%		16.1%			**56**
Arterial Blood Gas Sampling	1.4%	1.4%		4.2%	15.5%	7.0%	1.4%	**31.0%**		**38.0%**	**71**
Transcutaneous Measurement of Blood Gases			2.6%	**28.2%**	**25.6%**	15.4%		**25.6%**	2.6%		**39**
Overnight Oximetry	8.7%	3.9%	5.8%	**28.2%**	21.4%	10.7%	1.9%	16.5%	1.0%	1.9%	**103**
Limited Multichannel Studies (< 5 signals)	1.8%	1.8%	3.6%	23.2%	**35.7%**	17.9%	1.8%	8.9%		5.4%	**56**
Limited Multichannel Studies (5 or more signals)	1.8%	1.8%	1.8%	24.6%	**42.1%**	19.3%	1.8%	5.3%		1.8%	**57**
Full Polysomnography, incorporating EEG				17.6%	**52.9%**	11.8%		17.6%			**17**
CPAP Loan Service			7.1%	7.1%	**32.1%**	10.7%	3.6%	**32.1%**	7.1%		**28**
CPAP Assessments/Trials/Titration	1.4%	2.9%		12.9%	**44.3%**	14.3%	2.9%	20.0%	1.4%		**70**
CPAP Follow Up & Support	1.5%	2.9%		14.7%	**35.3%**	13.2%	2.9%	**25.0%**	2.9%	1.5%	**68**
Response to Hypoxic Challenge (flight simulation)		1.3%		21.3%	**45.3%**	21.3%	6.7%	4.0%			**75**
Bronchial Challenge (histamine/methacholine etc)				21.5%	**53.2%**	17.7%	2.5%	2.5%		2.5%	**79**
Challenge Testing - Other				24.2%	**48.5%**	18.2%	3.0%	6.1%			**33**
Assessment of Hyperventilation Response				13.8%	**27.6%**	**24.1%**	10.3%	10.3%	13.8%		**29**
Assessment of Exercise Tolerance Using Step Tests	4.2%	4.2%		**25.0%**	**25.0%**	4.2%		16.7%	**20.8%**		**24**
6 or 12 Minute Walk Tests	2.8%	4.7%	5.6%	**26.2%**	**29.9%**	12.1%	2.8%	4.7%	11.2%		**107**
Shuttle Walk Tests	1.5%	4.5%	3.0%	**27.3%**	19.7%	4.5%		10.6%	**28.8%**		**66**
Exercise Induced Asthma (Bronchial Lability)	1.0%	2.1%	5.2%	24.0%	**44.8%**	17.7%	2.1%	2.1%		1.0%	**96**
Gas Exchange, Ventilation and Work Rate (CPET)				15.7%	**51.0%**	25.5%	5.9%	2.0%			**51**
Steroid Trials	4.3%	1.1%	7.5%	**26.9%**	20.4%	4.3%	3.2%	**24.7%**		7.5%	**93**
Skin Allergen Testing	7.4%	1.1%	3.2%	18.1%	20.2%	6.4%	1.1%	**39.4%**		3.2%	**94**
Ambulatory Oxygen Assessment			1.8%	10.7%	**28.6%**	14.3%	1.8%	**32.1%**	7.1%	3.6%	**56**
Long Term Oxygen Therapy Assessment		1.1%		13.8%	25.3%	5.7%	4.6%	**43.7%**	1.1%	4.6%	**87**
Nebuliser Assessments	4.8%	1.2%	2.4%	**19.3%**	7.2%	6.0%	3.6%	**51.8%**	3.6%		**83**
Nebuliser Loan Service	8.6%		2.9%	5.7%	**11.4%**	5.7%		**54.3%**	11.4%		**35**
Acute NIV for hospitalised patients in resp. failure	1.4%	1.4%		1.4%	**13.9%**	8.3%	1.4%	**55.6%**	13.9%	2.8%	**72**
Long-term NIV domicilary support	1.9%	1.9%		1.9%	**18.5%**	13.0%		**48.1%**	11.1%	3.7%	**54**
Inspiratory Muscle Training					8.0%			16.0%	**76.0%**		**25**
Pulmonary Rehabilitation				1.3%	3.8%	2.6%		35.9%	**53.8%**	2.6%	**78**
Respiratory Outreach Team / Community Working					4.9%			**88.5%**	6.6%		**61**
Direct Access Spirometry	13.3%	6.7%	3.3%	16.7%	**26.7%**	10.0%	6.7%	16.7%			**30**
Spirometry Training for Primary Care				8.8%	**41.2%**	35.3%	5.9%	8.8%			**68**
Spirometry in the Community (delivered by Dept.)	7.4%	3.7%	3.7%	14.8%	**37.0%**	18.5%	3.7%	11.1%			**27**

5% to 10% *>10%* ***Bold** = greater values for each procedure*