Methods

1. Firstly, we surveyed a population of JD working in our Hospital using an electronic survey platform (Surveymonkey®).
2. Secondly, a group of inpatients requiring ABG sampling were surveyed over two months whereby half received topical LA and half did not. The LA used was Denela® 5% cream (Lidocaine 2.5% + Prilocaine 2.5%) applied 10 to 15 min prior to DRAP. Pain associated with DRAP was assessed using a combination of the Wong-Baker FACES pain rating visual scale[1] and a visual analogue pain scale, both scoring the pain from 1 ("no pain") to 6 ("worst pain").

Results

1. 68 JD were contacted and 26 responses were received (shown in Table 1).
2. 56 DRAP were performed for ABG sampling, 50% received topical LA. The median (inter-quartile range) pain score was reduced with LA prior to DRAP (2.0 [1.8] "moderate pain") compared to performing DRAP without LA (3.0 [4.0] "severe pain"), $p < 0.008$. The doctors reported insignificant interruption to their ward duties by using topical LA.

Abstract M29 Table 1 Results of electronic survey: Use of local anaesthesia in arterial blood gas sampling

1. Do you take arterial blood sampling regularly?			
Yes: 100%		No: 0	
2. If answered "yes" to Q1, how often do you estimate you perform ABG sampling?			
Practically every day: 34.6%	At least once weekly: 50.0%	Less than once weekly: 15.4%	
3. Have you ever used local anaesthesia for radial arterial blood sampling? (excluding arterial lines)			
Yes: 26.9%		No: 73.1%	
4. If answered "no" to Q3, what's the reason for it?			
I have never heard about this practice before.	31.6%		
I have not been taught how to do it.	47.4%		
I usually don't have time to do it.	31.6%		
I do not think it would reduce the pain associated with the procedure significantly	26.3%		
5. Are you aware of the 'BTS guidelines for emergency oxygen use in adult patients' recommend the use of local anaesthesia for all arterial blood gas specimens except in emergencies or if the patient is unconscious or anaesthetised?			
Yes: 19.2%		No: 80.8%	

Conclusions Currently, LA is not used routinely as part of the ABG sampling by DRAP in our centre. Pain was significantly reduced with the use of LA when performing DRAP.

These data will help inform quality improvement projects designed to implement the usage of LA for ABG sampling using DRAP as per BTS recommendations.

REFERENCE

1 Baker C. *Orthopaedic Nursing* 1987;**6**(1):11–2

M30 RESPIRATORY SKILLS COURSE FOR POST-GRADUATE MEDICAL TRAINEES; INSPIRING FUTURE RESPIRATORY TRAINEES

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10.1136/thoraxjnl-2015-207770.457

Introduction/objectives Respiratory medicine curriculum requires medical registrars to be competent in procedural skills such as intercostal chest drain (ICD) insertion, non-invasive ventilation (NIV) and thoracic ultrasound.[1] Previous research[2] has shown that medical registrars do not feel confident in performing respiratory related procedural skills and required further training in these skills.

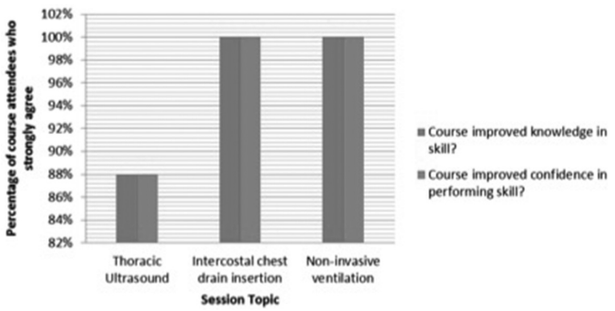
The aim of this research was to assess medical trainees' experience and confidence in performing respiratory procedural skills and the influence a respiratory skills course had on trainees' career aspirations and their confidence to perform these skills.

Methods A respiratory skills course consisting of three evening sessions was designed and delivered to medical trainees'. Teaching was delivered through small group tutorial, simulation and practice on real patients.

A pre- and post-course survey was designed, consisting of closed, Likert style and free-text response questions. This was distributed to eleven attendees at the course.

Results 50% of course attendees had received previous teaching on NIV and thoracic ultrasound whilst 70% had previous teaching on ICD insertion. The majority of candidates did not feel confident in performing the procedural skills prior to the course.

Following the course, all attendees felt that the course had improved their confidence and knowledge in performing all three procedural skills (Figure 1). One candidate stated that the course had 'made me more enthusiastic about my career choice in respiratory medicine.'



Abstract M30 Figure 1

Conclusion Although this study was small, the results are positive. There are however, implications to running further courses due to the willingness of faculty to facilitate sessions in their own time. This research does show that medical trainees do not feel confident in performing procedural skills, highlighting the need for more sustainable teaching in these areas to improve confidence and thus inspire trainees in medical careers.

REFERENCES

1 Joint Royal Colleges of Physicians Training Board. Specialty training curriculum for respiratory medicine 2010. Available at: http//www.jrcptb.org.uk. [Accessed 13 July 2015]
2 Scott A, Byrne D, Garvey JF, O'Regan A. How confident are medical registrars in performing respiratory orientated procedural skills? *Irish J Med Sci.* 2014;**183**(11):508

M31 INTRODUCTION OF EBUS INTO A RESPIRATORY DEPARTMENT – A REFLECTION ON EXPERIENCE REQUIRED

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10.1136/thoraxjnl-2015-207770.458

One Respiratory Physician trained to perform EBUS in a teaching Hospital in the UK and had supervised experience for approximately 50 cases over a period of 1 year.

This learnt skill was taken abroad to another respiratory department with no prior experience in EBUS. One other colleague was nominated to take part and be trained over the introductory period of 9 months.

Typically 2 endoscopy nurses were present, and rotation of staff was controlled to maintain expertise throughout this period. On site Consultant Pathologists and a cytopathology technician were present for each procedure.

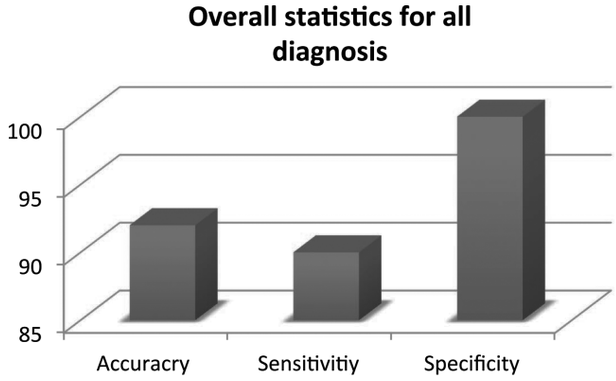
Patients underwent standard bronchoscopy then proceeded immediately to EBUS. Moderate conscious sedation was used.

A total of 50 patients went forward for EBUS-TBNA in this period. 25 were female and 25 were men with a mean age of 64.3 and 58 respectively with a range of 20 to 87 years. A total of 56 nodes were performed and the most commonly biopsied nodal stations were 7 (43%) and 4R (42%). Nodal stations biopsied included 2R, 4R, 4L, 7, 10R, and 11R.

The overall accuracy, sensitivity and specificity was 92%, 90% and 100% respectively. The accuracy, sensitivity and specificity for lung cancer diagnosis was 89%, 87% and 100% respectively. The sensitivity and accuracy for sarcoidosis was 100%.

One complication of minor bleeding was noted.

We conclude that a safe and reliable EBUS service can be started in a department where a physician has been involved with 50 cases. We postulate it takes a further 50 cases per consultant to achieve competency and in our department about 9 months at present. We think it is important to control the number of staff performing the procedures initially and this approach is associated with minimal complication and good results for our first cases.



Abstract M31 Figure 1

M32 DESIGN AND DEVELOPMENT OF A NEW PMDI TRAINING AID

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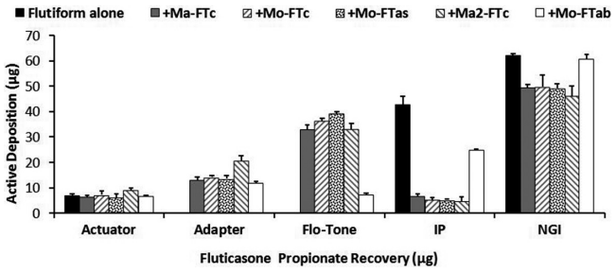
10.1136/thoraxjnl-2015-207770.459

Introduction and objectives Despite differences in actuator resistance between pressurised metered dose inhalers (pMDIs), 'inhale deeply and slowly' remains universally recommended for drug delivery. Training aids to tutor inspiratory flow rate are vulnerable to resistance effects and can lead to patient error under a misconception of corrected technique. Actuator mouthpiece design can also limit availability of suitable training devices. Using the Flutiform low-resistance pMDI (Napp Laboratories Ltd), we describe here the development and testing of a suitable training aid based on the audible tone Flo-Tone trainer (Clement Clarke).

Methods Flutiform 5 µg formoterol fumarate/125 µg fluticasone propionate (4.5/115 µg ex-actuator respectively) was assessed via the Next Generation Impactor (NGI) operated at 30 L/min, alone, and together with machined (Ma) or moulded (Mo) mouthpiece adaptors attached to the commercially available Flo-Tone (FTc), anti-static plastic Flo-Tone (FTas), or an abbreviated version (FTab). All least three replicates of each were completed. Drug recovery (µg) from the actuator, adaptor, Flo-Tone, induction port and NGI was determined. The key aerosol performance parameters Fine Particle Fraction (FPF,% <5 µm) and Fine Particle Dose (FPD, µg <5 µm) were determined.

Results Formoterol and fluticasone drug delivery data trends were the same. Here we report the fluticasone data. Drug mass recovery (Figure 1) indicated that the moulded mouthpiece adaptor with abbreviated Flo-Tone (Mo-FTab) approximated most closely to Flutiform drug delivery without a training aid. All prototypes showed reduced throat (induction port) deposition. FPF% and FPD µg data for all prototypes, respectively, were: Flutiform alone, 44.8, 46.9; Ma1-FTc, 36.7, 37.3; Ma2-FTc, 33.1, 34.5; Mo-FTc, 36.0, 38.0; Mo-FTas, 34.4, 36.9; and Mo-FTab, 44.6, 46.4.



Abstract M32 Figure 1 The deposition profile of Fluticasone within test components, mean values ± SD

Conclusions This process has shown that it is possible to tailor an existing audible training aid to a specific pMDI, enabling an audible training tone at an appropriate inspiratory flow rate without drug delivery compromise. We are currently extending this design-development research to create a standardised device suitable for a range of pMDIs in popular use and that vary in actuator resistance.