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290. Medical education

P2843**Health care professionals's knowledges of OSAHS's diagnosis**P.M Prapa¹, I. Nikolopoulos¹, P. Kythreotis¹, Konstantinos Gourgoulialis².¹Department of Respiratory and Critical Care Medicine, Sotiria Chest Hospital, Athens, Greece; ²Respiratory Medicine Department, University of Thessaly, Medical School, Larissa, Greece

Introduction: Obstructive Sleep Apnea/Hypopnea Syndrome (OSAHS), an increasingly well-recognized disease, requires early diagnosis to improve quality of life and prevent its complications. The aim of this study was to evaluate the knowledge of Health Care Professionals' in relation to OSAHS.

Methods: A questionnaire was designed to explore HCPs knowledge to identify OSAHS. It was completed by Respiratory Physicians in a Pulmonary Department, by General Practitioners in Primary Care Center and by Primary Care Physicians. A panel of Respiratory Physicians evaluated the answers.

Results: A total of 138 HCPs completed the survey, (53,6% Respiratory Physicians (n=74), 18,8% General Practitioners (n=26), 27,5% Primary Care Physicians (n=38).

The HCP's education on OSAHS was at University (33,4%), Post graduate (1,4%), Medical literature (66,7%), day-to-day practice (53,6%) and medical residency (60,9%).

The correct answers were for:

- Clinical symptoms: Snoring 78,2%, daytime sleepiness 87%, morning headaches 58% and nocturia 20,3%
- Complications: hypertension, 73,9%, chronic pulmonary heart disease 43.5% and
- Clinical features: obesity 79,7%, large neck circumference 42%.

Logistic regression analysis revealed that physicians who acquired their knowledge in their day-to-day practice on OSAHS were more likely to answer correct question concerning clinical symptoms (OR=13.12,95%CI: 2.94-58.41, p<0.001) complications (OR=5.73, 95%CI: 2.31-14.23, p<0.001) and clinical features (OR=12.69, 95%CI: 4.87-33.07, p<0.001).

Conclusion: Following this study; education sessions must be introduced in all education level in an attempt to improve the identification of this disorder and to allow the Physicians to take part in the management of OSAHS.

P2844**Experience of an intercostal chest drain training course in the Yorkshire and Humber postgraduate deanery**Georgina Esterbrook¹, Tim Sutherland², Matthew Callister², James McCreanor¹, Joe Hogg¹, Peter Smith¹, Richard Teoh³, Jack Kastelik³. ¹Respiratory Medicine, Pinderfields General Hospital, Wakefield, West Yorkshire, United Kingdom; ²Respiratory Medicine, St James's University Hospital, Leeds, West Yorkshire, United Kingdom; ³Respiratory Medicine, Castle Hill Hospital, Hull, East Yorkshire, United Kingdom

Introduction: A significant number of deaths and cases of serious harm have been reported as a result of the insertion of seldinger chest drains. Reasons include poor training and inadequate supervision of trainees. We devised a simulation chest drain insertion course to improve competency and reduce adverse events.

Methods: A half-day course was devised, consisting of a lecture, theory examination, practical simulation session and a competency-based assessment. Emphasis is placed on teaching current guidelines and small group supervised practice on manikins. A certificate of competence is provided for all candidates successfully completing the course. Feedback for each aspect of the course was collected based on 5 point Likert scale.

Results: Over 18 months, 13 courses took place and 140 feedback forms returned. In over 96% of cases, all aspects were rated as good or very good. The course was praised for the ratio of trainers to candidates, the length of time for practice, the seniority of the trainers and the length of course. A significant number of candidates would recommend the course to a colleague as part of medical training.

Discussion: In our region, this is the first course dedicated to teaching seldinger chest drain insertion. It successfully employs a variety of different educational methods, and provides a ratio of senior trainers to candidates that facilitates learning. In comparison to other practical skills courses, this course dedicates more

time to individual tuition and practice to thoroughly assess safety and competency. We would recommend that the simulation training of chest drain insertion should be available to all trainees in respiratory medicine.

P2845**Clinical impact of a program to educate community pharmacists in providing proper inhalation technique for asthma patients**

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Background: Currently, more than 10 types of inhaler devices are available in the asthma treatment. The prevalence of these inhalers has resulted in a wide range of choices for clinicians but in confusion for both medical staffs and patients regarding how to use inhaler devices correctly.

Objective: To evaluate the clinical impact of an educational program for community pharmacists to provide repeated instructions of correct and consistent inhalation technique to asthma patients.

Methods: Since 2007, Kitano hospital and Kita-ku Pharmaceutical Association Osaka have provided community-pharmacists with a regular educational program on correct inhaler use once a year. Certified participants have instructed asthma patients to use inhalers with proper technique at regular intervals (at least 6 months). We examined the frequency of asthma exacerbations, adherence to inhalation regimen using a 5-point Likert scale questionnaire, and health status assessed by St George's Respiratory Questionnaire (SGRQ) in asthma patients before starting the program and after four years.

Results: Usable information was obtained from 146 asthma patients at baseline and 143 those at 4 years. Compared with baseline values, significant decreases were found in the frequency of asthma exacerbations (1.4±1.6 vs 1.0±1.4 times/yr, p=0.042) and emergency room visits (0.5±1.0 vs 0.2±0.5 times/yr, p=0.004). Adherence to the inhalation regimen significantly increased (p=0.041), but SGRQ scores unchanged.

Conclusion: A regular program which educates community-pharmacists about how to instruct patients in proper inhaler use may improve asthma control and adherence to patients' inhalation regimen.

P2846**Quit smoking in pregnancy with asthma**

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The aim of this study was to identify the factors related to quit smoking during pregnancy in patients with asthma. The sample included 990 pregnant (417 with asthma) in age 18-40 years. They were interviewed about smoking and social status. CO breath testing has been made for cigarette consumption.

Investigation shows that 26.4% pregnant without asthma were smokers (6.95±0.94 cigarette per day), 23% pregnant with asthma were smokers (7.06±1.2 cigarette per day). Before pregnancy women smoked in 57.1% cases without asthma (11.3±1.6 cigarette per day) and in 49.4% with asthma (10.6±1.7 cigarette per day). Education programs were organized for pregnant with asthma. Health pregnant quit smoking in 14.7±1.9 week of pregnancy, patients with asthma – in 8.77±1.2 week. The cessation smoking program included of CO level measuring. The discrepancy of answers and CO levels was in 22% of cases.

The factors, promotional quit smoking during pregnancy were: educational programs for smokers, non-smoking family (especially husband), high education, support of husband in quit smoking. Unmarried pregnant smoked twice more often than married women. Planned pregnancy contributed to smoking rejection, so amount of smoking females was one and a half time smaller in comparison with females with unplanned pregnancy. The number of women who had more than one child was higher among non-smokers and abstinent smokers than among smokers (p=0.004).

Conclusion: Smoking was founded in women with asthma so often as without asthma. Pregnancy is a main factor to smoking cessation for women. Several factors influence smoking cessation were: the educational programs for smoking, non smoking their partners, marriage, high education, planned pregnancy.

P2847**Effect of training in educational programs at the level of control and quality of life of patients with bronchial asthma**

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Objective: To study the effect of educational programs, training in asthma-school

on the level of control and quality of life in patients with persistent asthma, detection of comorbidity.

Materials and methods: The study summarizes the results of the survey 57 patients with bronchial asthma, which for 5 years regularly attending classes in the asthma-school. Of the 24 examined patients with severe asthma. To assess the quality of life questionnaires were used AQLQ, ACQ. The direction of the educational program on asthma involves several steps: asthma visiting schools for physicians, asthma school for patients, creating Web sites for patients, listening to lectures. The most effective training methods were group sessions of 5-7 patients, round table, individual sessions with the doctor. Before the training of 40 patients had not received basic therapy regularly. Currently, all of these patients have a high commitment to treatment, through monitoring of their condition (filling questionnaires of quality of life, regular spirometry advice specialist doctor). The most frequently diagnosed gastroesophageal reflux disease (65%), drug intolerance (23%), cardiovascular disease (30%), depression (26%). Treatment of comorbidity improved control and adherence to treatment.

Conclusion: The long-term (over 5 years) studies of patients with persistent asthma to an increase in adherence to treatment, improve disease control and quality of life. We need to continue the search for new forms of patient education, not only with asthma but also with chronic obstructive pulmonary disease.

P2848**Does a training programme in chest drain insertion improve patient safety?**

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Introduction: Following the National Patient Safety Agency alert for intercostal chest drain (ICD) insertion, our respiratory department introduced a training programme for all registrars (SpRs) & junior doctors. Emphasis was placed on completing a proforma at the time of insertion & notifying our team, so that subsequent closer monitoring of the ICD management occurred.

Methods: A retrospective study of 52 consecutive ICD insertions notified at Sandwell Hospital over a year (Jan09-Jan10, males 80%, median age 67 years) was conducted. Indications for drainage, technique, documentation & complications were audited. The results were compared with a previous departmental 6 month audit.

Results: Medical SpRs inserted 12(23.07%), respiratory SpRs & senior house officers (SHOs) 24 (46.15%), other SHOs 3 (5.7%), consultants 6 (11.5%), house officers 1 (1.9%) & in 6 (11.5%) the grade was unknown. 21 (40%) were inserted out of hours, 22 (42%) on the respiratory ward. Type of drain: 49 Seldinger (94.2%), 2 blunt dissections (3.8%), 1 pigtail (1.9%). All indications were according to British Thoracic Society guidelines: 21 pneumothoraces (40%), 29 pleural effusions (55%) & replacing 2 blocked ICDs (5%). The average length of ICD in situ 3.4 days compared to 5.2 previously. Complications included 1 empyema & 3 drains fell out. In the earlier audit, complications included ICD insertion into a bulla, 1 insertion into the liver, 2 severe site infections & 2 re-admissions for empyema.

Conclusions: ICD training programmes improve patient safety. As over half of ICDs are placed by non-respiratory junior staff, there is a continual need for training. However, this is not just about ICD insertion; post insertion care, prompted by the proforma reduces complications & length of ICD stay.

P2849**Competency assessment of foundation year 1 doctors in the prescription and use of oxygen**

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Introduction: Oxygen is a commonly used drug in hospital medicine, with at least 25% of ward based patients receiving it at any one time. The UK National Patient Safety Agency (NPSA) report on oxygen therapy in hospitals (2009) detailed over 200 incidents due to inappropriate oxygen prescription, with a subsequent mandate that all oxygen should be prescribed as per national guidelines.

Aim: To assess competence levels in Foundation year 1 (F1) doctors in oxygen prescription in our hospital trust.

Method: A questionnaire was completed at the beginning of the F1 year, to assess understanding of oxygen prescription. This was repeated 6 months later following teaching sessions and clinical experience.

Results: 22/30 (73% of F1 doctors) took the survey with a mean score of 58% (range 40-80%). 18 (60% of the original cohort) took the test six months later with an increased mean score of 67% (range 50-80%) p0.04.

Improvement was seen in the use of emergency oxygen in patients with normal saturations (45% vs 78%), on oxygen prescription (63% vs 100%) and in the correct procedure for stopping oxygen (45% vs 55%) Persistent knowledge gaps were seen with target saturations (72% to 70%) and increasing flow rates to match patient needs (32% vs 22%).

Conclusions: Results demonstrate a lack of knowledge of national guidance amongst junior doctors. Improvement was demonstrated following teaching sessions and clinical experience. Future training sessions should focus on areas where improvement was not seen to increase adherence to guidelines and improve patient care.

P2850**The use of lambs chests in chest drain insertion simulation**

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In an attempt to familiarize medical trainees with chest drain insertion, we sought to find a successful way of instructing students with its insertion technique.

Students were given a thirty-minute lecture on chest anatomy, indications for insertion and then the insertion was demonstrated. Students were then taught the Seldinger (tube over guide-wire) technique and also the surgical drain (directly-visualized) insertion technique in a one-hour lab session. No direct comparison was made between other popular simulation mediums (such as plastic models or pork back ribs) nor then were students subsequently directly observed inserting tubes on actual patients.

The students were instructed then monitored and scored on successful insertion in the pleural space by an examiner informally. In discussion it was felt that the tactile feedback from the lamb's carcasses demonstrated outstanding anatomical correlation and also demonstrated similar difficulties to human chest drain insertion. Both the anterior & mid-axillary lines were clearly visualized as well as the costal margins. There was also the opportunity to demonstrate administration of local anaesthetic agents as well as one of the most common pitfalls of chest tube insertion: hitting the bone. The session was received very well with feedback revealing an appropriate amount of time spent on both instruction and demonstration.

Lamb's thoraces are a superb medium for simulation-based instruction of chest tube insertion. The use of an animal model has its benefits with respect to anatomical realism and the tactile realism of feeling actual muscle and bone. It likely provided a good stepping-stone between abstract classroom insertion instruction and hospital patient insertion.

P2851**An assessment of physicians knowledge of the GINA guidelines**

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Introduction: The Global Strategy for Asthma Management and Prevention (GINA) is useful in the management of asthma patients.

Aims and objectives: We hypothesized that many physicians who attend to asthma patients are not familiar with the components of the GINA guidelines.

Methods: Based on the GINA guidelines, a multiple choice questionnaire which addressed various components of the guidelines was distributed to physicians who attend to asthma patients.

Results: 54 Physicians were randomly selected from among 118 physicians from 2 Teaching Hospitals in Nigeria: 31 from Internal medicine, 20 from Family Medicine and 3 from Respiratory unit. There were 10 general internists, 2 medical officers, 28 junior residents, 11 senior residents and 3 consultants. 72.2% of the respondents did not attend any Continued Medical Education (CME) in asthma after graduation. Those of them who attended a CME post graduation scored higher than those who had not attended but this was not significant (39.78% Vs 31.2%). There was also an improvement in total performance with hierarchy but this was not statistically significant. Respiratory physicians scored significantly higher than the Internal medicine and the Family physicians (70.96% Vs 34.13% Vs 37.09%). The knowledge of pathological basis of asthma had the highest sub-score (50%) followed by diagnosis (48.7%) with asthma education having the least score (16.6%). Overall the average total score was poor (37.2%).

Conclusion: By identifying the areas of deficiency in each group of Doctors we can design education intervention programmes to improve the understanding of the GINA guidelines among physicians and ultimately the quality of care.

P2852**Patients' knowledge about inhalation therapy in pulmonology – One year after intervention**

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Background: Inhalation therapy (IT) is important in successful treatment in pulmonology.

Aim: To compare the knowledge about IT in patients (Pts) with asthma or COPD, before and one year after the education was given.

Method: In January 2010 and January 2011, we used anonymous self created six-item questionnaire to interview the same group of 56 Pts who were treated with IT at University hospital (average age 56±12 years). We used McNemar test for statistical analysis.

Results: The number and proportion of Pts with correct technique or positive answers is shown in Table where p<0.01 = significant difference; NS = not significant.

Table 1 - Results

Items/Questions	2010, N (%)	2011, N (%)	p
1. Showed correct technique of using IT	20 (35.5)	30 (50)	<0.01
2. IT is only for severe degree of disease	18 (32.1)	10 (17.8)	<0.01
3. IT consists of various types of drugs	16 (28.6)	19 (33.9)	NS
4. It is possible to addict to IT	17 (30.4)	12 (21.4)	NS
5. Treatment interruption by Pt's decision	24 (42.8)	22 (39.2)	NS
6. Do not make difference between use of short and long acting β2 agonists	40 (71.4)	38 (67.8)	NS

Conclusions: One year after education, the Pts significantly corrected their technique of using IT and their misconception about using IT only in severe degree of disease is decreased. Although improved, the knowledge related to the other items requires further patients' education.

P2853**Audit of intervention to improve educational experience in a respiratory medicine department**

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Introduction: A continuing rise in service pressures and reduced working hours creates an ever increasing challenge in the provision of a good quality training experience for junior doctors.

Objectives: The aims were to determine trainees' perception of the education in their current post, provide opportunity for suggestions for improvement, make changes and then assess the effectiveness of changes made.

Methods: All juniors within the department were asked to complete an anonymous questionnaire, covering educational aspects of their post, within the last few weeks of July 2010. This was repeated in November to assess the impact of changes made.

Results: Response rates of 87.5% (14/16) and 85% (17/20) were obtained with all grades represented. Training was rated fair to excellent. The most useful educational experience for the more junior doctors, in both audits, were on call duties where they were managing conditions they had not previously encountered. The more senior trainees found ward rounds most helpful.

Areas for improvement identified in the first audit included enabling juniors to attend grade-specific teaching, increasing ward round teaching, and increasing opportunities for workplace based assessments.

Following implementation of changes, 62.5% reported workplace based assessments gave useful feedback compared to 36% previously. Attendance at grade-specific teaching increased from 57% to 89% in more junior trainees. All grades commented on the usefulness of this teaching as it was targeted at their level.

Conclusions: Surveying trainees regarding their educational experience is useful and can allow focussed intervention to improve areas of respiratory education.

P2854**Audit on pleural procedure in UK district general hospital**

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Introduction: Intercostal Chest Drain (ICD) insertion is an invasive procedure indicated in certain emergency and elective scenarios. The practice is changing with more importance given to training, safety and use of ultrasound image guidance.

Aims: The aim of this audit was to access current awareness & training level of junior doctors and level of practice.

Methods and results: First part of audit includes questionnaire survey on awareness and competency. Of the 26 respondent, 61% were independently competent at ICD insertion, but only 9% of them performed more than 10 procedures in last one year. Only 23% of doctors had thoracic ultrasound training.

In the second part, 38 consecutive cases were audited retrospectively (male = 76%, female = 24%). Pleural effusion (59%) and pneumothorax (31%) accounted for most of the indications. 38% of the procedures performed out of hours and all of them were justified. Only 68% had any form of consent documented. Majority (85%) were inserted by senior doctors (ST3+ level). Bedside Ultrasound was used in 80% of pleural effusion cases. The nursing drain observation chart was maintained in 88% cases. 8% minor immediate complication reported, no death or organ damage directly related to the procedure.

Discussion: This audit has demonstrated improving safety awareness that includes, most of procedure performed by trained doctors and use of bedside ultrasound. But it has highlighted lack of training at junior doctors level, including thoracic ultrasound. Following this audit we have introduced the safety check list and training programme for junior doctors including thoracic ultrasound technique.

References:

- [1] T Havelock, BTS Pleural procedure guidelines 2010.
- [2] NPSA Rapid response Report- NPSA/2008/RRR003.

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P2855**High-fidelity in-situ simulation – A novel training modality for non-invasive ventilation**

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Introduction: Non-invasive ventilation (NIV) is an expanding treatment modality requiring staff experience and training to ensure clinical effectiveness. Non-specialist junior doctors and nurses often have infrequent exposure to NIV thereby limiting confidence. Patients requiring NIV are often critically unwell and effective crisis resource management (CRM) skills (e.g. communication, leadership, task delegation) are often critical in achieving patient compliance and formulating clear treatment plans. For these reasons, high-fidelity simulation provides an opportune training modality where trainees can practise in a safe “real” setting to increase self-confidence and develop key CRM skills.

Method: We designed an “in-situ” high-fidelity simulation-training module where trainees partake in pre-designed undisclosed scenarios leading a multidisciplinary team involving a nurse blind to the scenario and faculty “plants”. Scenarios are constructed to provide challenging clinical and ethical situations pushing trainees abilities to promote key skills at a registrar level. Candidates used a 6-point Likert Scale questionnaire to self-analyse their performance and learning post-simulation.

Results: Pilot results show trainees have found the module improves confidence in managing respiratory failure requiring NIV when added to a standard training programme. The module additionally develops trainee insight into their situational awareness as well as key communication, clinical decision-making, leadership and team-working skills enabling a structure for future focused improvement.

Conclusions: High-fidelity simulation can be used as an effective training tool as part of a comprehensive NIV training programme.

P2856**Continuing medical education: A contribute of the pneumologists in the pre-hospital medicine**

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Until now in Tuscany, the doctors of the Ambulance Service 118 originate from general practitioners after specific qualifying courses, usually directed by resuscitators. In 1999, in Italy, was activated the Continuing Medical Education (CME) and in 2002 the Tuscan Region acknowledged the provisions in the matter. As our ambulance patients present a considerable number of low oxyhemoglobin saturations (Olla et al., ERJ 2003: 44s, 381s), formative events in respiratory diseases were carried out, involving specialists in respiratory medicine as teachers. The events were: emergency management of airways, acute respiratory failure, use of mechanical ventilators during ambulance transfers, alternative devices to intubation, CPAP and non invasive ventilation, oxygen therapy.

Formative events were unrolled in 4 hours meetings. At the end of meetings, learning and approval tests were carried out, for acquire the CME credits. Participants had to replay correctly at last the 80% of the questions and to attend the lesson's time. Moreover 2 short meetings of 2 hours each, were carried out and related to some aspects of respiratory fatigue and spontaneous pneumothorax. 382 hours of specialized formation, the 9% of all the formative hours dispensed from 2003 to 2010 by our Service, were delivered. 100% of the participants found interesting the treated topics; 98.9±1.8% found them useful in theory and the 98.3±2.9% in practice.

Besides the good results in CME credits, 1 point each hour, important concepts and techniques, from the point of view of the pneumologists were explained, showing a further vision of the respiratory emergencies and their management in the pre-hospital medicine.