

1st IPCRG South Asian Scientific Conference

Clinical Research Results Abstracts

CR-01. Anti-influenza and pneumococcal vaccination coverage in primary care professionals in the Canary Islands.

Yolanda Martín Blázquez, Virginia Mirabal Sánchez
GRAP

Aim:

To study influenza vaccination coverage and pneumococcal vaccine in primary care professionals and to determine the factors associated with vaccination (season 2015-2016) in the Community of the Canary Islands.

Method:

Descriptive cross-sectional study of 247 health professionals (MAP, pediatricians and nurses), who completed an anonymous questionnaire. An ad-hoc questionnaire was designed, which was personally delivered to 9 non-randomly selected health centers on the island of Gran Canaria. It included demographic data, such as age and sex, professionals such as seniority and professional status. Also individual conditioning factors such as coexistence with children under 15, suffer from chronic disease or live with relatives over 65 years. Coverage and variables associated with vaccination were determined using non-conditional logistic regression models.

Results:

Participation was 66.3% (247 subjects) and 6 were excluded due to errors in completing the questionnaire, leaving a final sample of 240 subjects. The sample was represented by 109 family doctors (45.4% of the sample), 33 pediatricians (13.7%) and 98 nurses (40.8%). 64.8% were women. Flu vaccine coverage was 47.9% versus a pneumococcal vaccination rate of 12.5%. 10% of the subjects had double vaccination. The probability of vaccination in both cases was higher in professionals > 55 years old, women and pediatricians. It was found an association between anti-influenza vaccination and pediatrician (adjusted odds ratio (ORa): 8.94; 95% confidence interval (95% CI: 3.39-2.30) and female (ORa: 3.08; 95% CI: 1.58-6.22). In relation to the pneumococcal vaccine, an association was observed in the subjects with a professional category of nurse (ORa: 3.36; 95% CI: 1.13 - 11.08).

References & Clinical Trial Registry Information

The anti-influenza vaccination coverage (47.9%) was lower than that of other Spanish studies. The pneumococcal vaccine rate was markedly lower than anti-influenza vaccine. We consider that vaccination rates are insufficient, recommending the design of strategies to improve them, so that primary care professionals avoid the disease and not be become vectors of transmission.

Corresponding Author: Yolanda Martín Blázquez Email: ymarblac@gmail.com

CR-02. Assessing Possible Factors Affecting the Nutritional Status of Patients with COPD at Selected Primary Care Settings in Sri Lanka

Sujeewa Karunathilake¹, Prasanna Siriwardene²

¹Postgraduate Institute of Medicine, ²Primary care Respiratory group

Aim:

Chronic obstructive pulmonary disease (COPD) is a common problem and a major cause of morbidity and mortality throughout the world. Majority of COPD are diagnosed and treated at primary care settings. Pulmonary Rehabilitation and nutritional supplementation are important components in the management of COPD. In primary care settings, the family physician plays a major role in providing dietary advice to patients with COPD as part of their management. Aim of this study is to identify the factors affecting the nutritional status of patients with COPD at primary care settings.

Method:

It is a descriptive cross-sectional study carried out at four primary care settings. All stable patients with diagnosed COPD were recruited consecutively until the required sample size of 130 was achieved.

Data collection was conducted by the chief Investigator using an interviewer administered questionnaire. Height and weight was measured at entry into the study. Spirometric values were extracted from medical records.

Results:

Out of 130 respondents, 27 (20.8 %) were underweight (BMI < 17.5). There was a statistically significant small positive correlation of 0.16 between BMI and FEV 1. Statistically significant association ($p > 0.05$) was found between low BMI and having dyspnea. Most frequent intrinsic factors affecting nutrition among underweight group were nausea (68%), Poor financial status (64%) and GORD (48%) and extrinsic factors were oral health status or problems with mastication (52%), shortness of breath (40%) and bouts of coughing during meals (40%).

Conclusion:

Nutritional status and factors affecting nutrition are important aspects in the management of COPD.

Declaration of Interest:

There are no conflicts of interest

Corresponding Author: Sujeewa Karunathilake Email: wdsdamayanthi@gmail.com

CR-03. Assessment of indoor air quality and the occurrence of respiratory diseases among urban sri lankan children

Rashmalee Peries¹, Madushani Silva²

¹*International Institute of Health Sciences, Welisara*, ²*Ministry of Health, Sri Lanka*

Aim:

Majority of deaths among children less than 5 years old from acute lower respiratory infections are due to particulate matter inhaled from indoor air pollution from household solid fuels. Therefore, the purpose of this study was to assess the quality of indoor air and how it contributes to the occurrence of lower respiratory tract infections among children.

Method:

A descriptive, cross-sectional study was conducted on 184 conveniently selected individuals using an interviewer administered questionnaire.

Results:

Out of a population of 184 mothers interviewed, 57.6% of the children were aged below 5 years. 77% & 39.4% had experienced a productive/dry cough, nasal congestion or a combination of both at least once in two months within the past few months, respectively. 43.9% of the population regularly had troubled breathing. 37.1% said they frequently used insect repellants & another 77% said that they regularly used incense sticks. 77.4% had asbestos cement sheets as their roofing type & only 16.1% believed that their house was properly ventilated. 62.9% had changed their stoves within the past year (77.8%); out of which 18.4% said they changed due to smoke production. 44.4% said that their child had a terrible cough when even a slight amount of smoke is produced. 60.4% said that their house is close to the main road & 76.4% said that the child often play with furry toys.

Conclusion:

Therefore, it can be said that indoor air quality does significantly contribute to the occurrence of respiratory tract infections among children.

Corresponding Author: Rashmalee Peries Email: delrinep@hotmail.com

CR-04. Cardio-pulmonary functions of athletes involving in running events; implication for primary care physicians in Sri Lanka.

Dr. K.D.C. Upendra Wijayasiri¹, S. W Wimalasekera², H Waidyasekara², S Sivayogan³, C Thurairaja⁴

¹colombo south teaching hospital, ²Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, ³Faculty of Medicine, University of Sri Jayewardenepura, Nugegoda, Sri Lanka, ⁴University of Colombo, Colombo, Sri Lanka

Aim:

Most athletes visit primary care physicians especially to get medical advice to improve sports performance. Cardio pulmonary fitness assessment (CPET) of athletes is important to improve and monitor their sports performance and health status.

Objectives

To determine the cardiopulmonary functions of athletes engaged in running events and the effect of training on cardiopulmonary function.

Method:

National and university level running athletes (n = 62; male= 40, female= 22) were studied. Cardio-Pulmonary fitness parameters (*peak O₂ uptake (VO_{2peak}), anaerobic threshold (VO_{2AT}), exercise capacity(METs), peak heart rate (HR_{peak}), anaerobic threshold(AT), heart rate at AT- HR_{at}, blood pressure resting (BP_{rest}) and peak (BP_{peak}) and lung function parameters.*) were assessed by a Cardiopulmonary exercise testing machine with a Cycle ergometer (COSMED Inc.). Data were compared with age, height, weight and gender matched controls not engaged in regular sports training (n= 60; male= 30, Female=30). Data were analyzed using SPSS-16 statistical package.

Results:

There was a significant improvement of some cardiopulmonary fitness parameters amongst male and female athletes compared to controls (male - FVC, FEV₁, PEFR, VO_{2max}, VO_{2max} time, MET, BP rest, BP ex and female - FVC, RF, VO_{2max}, HR peak, HR at, MET) (p<0.05). There were no significant correlation of cardiopulmonary functions of male athletes with training duration. Female athletes had a positive correlation of FEV₁, FVC, MVV, SpO₂ and a negative correlation with FEV₁/FVC ratio, HR_{peak}, HR_{at} with training duration.

Discussion

The association of improvement in VO_{2max} and other physical performance parameters with the duration of training was poor. The reasons may be biological issues as cardio pulmonary problems, problems in peripheral circulation or training errors. Improvement of VO_{2max} along with other parameters enhances performance.

Conclusion:

Primary care physicians need to be aware that sub optimal performance of an athlete should be investigated with cardiopulmonary fitness testing in consultation with an exercise physiologist.

Declaration of Interest:

no conflict of interest

References & Clinical Trial Registry Information

1. Dennis G O'Connell et al, Journal of Strength and Conditioning Research -2016 National Strength and Conditioning Association, 30(2)/430–437
2. Jan Hoff et al, Journal of Strength and Conditioning Research- 2016 National Strength and Conditioning Association, 30(5)/1373–1378
3. Ana r. Alves et al, Journal of Strength and Conditioning Research- 2015 National Strength and Conditioning Association, 30(7)/2019–2032

CR-05. Childhood asthma: The role of socio-cultural beliefs in the care of asthma among parents of Malay ethnicity.

Hani Salim¹, Siti Nurkamilla Ramdzan², Nursyuhada Sukri², Khoo Ee Ming², Ping Yein Lee¹, Ai Theng Cheong¹, Nik Sherina Hanafi², Su May Liew², Norita Hussein², Azainorsuzila Ahad³, Julia Suhaimi², Hilary Pinnock⁴

¹University Putra Malaysia, ²University Malaya, ³Ministry of Health Malaysia, ⁴University of Edinburgh.

Aim:

To explore the role of socio-cultural beliefs in the care of asthma among parents of Malay ethnicity.

Method:

A qualitative approach was employed using focus group discussions (FGD) among Malay ethnic parents of children diagnosed with asthma from two suburban primary schools. Informed consent was obtained prior to the interviews. FGDs were conducted by two researchers using a semi-structured interview guide, which was developed based on the constructs of the Biopsychosocial model and literature reviews. Interviews were audio-recorded and transcribed verbatim, which were checked for accuracy. A thematic approach was used to analyse the data.

Results:

Sixteen parents (all female; aged 33 to 51 years) participated in five FGDs. Three themes emerged from the analysis 1) Socio-cultural beliefs shaped parental understanding of the causes and triggers of asthma. For example, some parents believed that because asthma was genetic it was not possible to manage or control the symptoms; 2) Parents chose alternative therapy for the children's asthma self-care, as it was believed to be effective and curative; 3) The practice of fasting during Ramadhan did not interfere with the use of inhalers for asthma exacerbation.

Conclusion:

Asthma care in Malay children was closely moulded by their parents' socio-cultural beliefs. Many misconceptions about asthma and its treatment were based on these beliefs. Development of a culturally sensitive intervention is vital to improve asthma care in a multi-ethnic society.

Declaration of Interest:

This study was funded by a research grant from the International Primary Care Respiratory Group (IPCRG).

Corresponding Author: Hani Salim Email: hanisyahida@gmail.com

CR-06. Chronic lung disease perception and smoking (cessation) in Kyrgyzstan – a mixed-method FRESH AIR study

Debbie Vermond¹, Evelyn Brakema¹, Matty Crone¹, Rianne van der Kleij¹, Marise Kasteleyn¹, Charlotte Poot¹, Maamed Mademilov², Ilias Dautov², Aizhamal Tabyshova², Talant Sooronbaev², Niels Chavannes¹

¹Leiden University Medical Center, ²National Center for Cardiology and Internal Medicine

Aim:

Nearly half of the Kyrgyz men smoke, and Kyrgyzstan has the highest chronic respiratory mortality worldwide. However, little is known about local perceptions of chronic lung disease (CLD). This study aims to explore the relation between (1) CLD-perception and smoking behaviour by community members (CM), and (2) CLD-perception and confidence about providing adequate smoking cessation support by healthcare professionals (HP). Results could benefit (the implementation of) smoking cessation support and other interventions towards CLD in Kyrgyzstan.

Method:

This is a sub-study of the Free Respiratory Evaluation and Smoke- exposure reduction by primary Health cAre Integrated gRoups (FRESH AIR) project, an implementation science project targeting CLD in low-resource settings. Using path analysis, we investigated the association between participant characteristics and the brief illness-perception on (1) smoking behaviour by CM and (2) confidence of HP in providing smoking cessation support. Both quantitative survey data and qualitative data (focus groups and interviews) were analysed to construct the path models and to show their interrelations.

Results:

We included 420 CM and 81 HP. 20% of the CM smoked, and 76.5% of the HP felt confident in providing smoking cessation support. For the CM, men had on average a 2.4 times higher chances to smoke than women. A lower perceived control over CLD, perceiving smoking as a cause of CLD and not perceiving the weather as a cause, were associated with lower chances to smoke. No other relations between CLD-perception and smoking behaviour were found. For HP, the type of HP and their confidence in recognising patients with CLD-symptoms were the most important predictors of confidence in providing smoking cessation support. No relation was found with CLD-perception.

Conclusion:

More than on CLD illness-perception items, focus could be on (1) gender and perceived causes of CLD in predicting CM' smoking behaviour and (2) the type of HP and their confidence in recognising symptoms in predicting HP' confidence in providing smoking cessation support in Kyrgyzstan.

Clinical Trial Registry: NTR5759 FRESHAIR <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

Declaration of Interest: This study was funded by a research grant from European Union's Horizon 2020 research and innovation programme under grant agreement No 680997

Corresponding Author: Debbie Vermond Email: D.Vermond@lumc.nl

CR-07. Clinical and socio-economic burden of COPD in Kyrgyzstan: FRESH AIR results

Aizhamal Tabyshova¹, Bermet Estebesova¹, Alina Beishenbekova¹, Job van Boven², Maarten Postma³, Talant Sooronbaev¹
¹National Center of Cardiology and Internal Medicine, ²University Medical Center Groningen, University of Groningen, ARTEG, ³University of Groningen

Aim:

According to the ERS Lung White Book COPD prevalence and mortality in Kyrgyzstan are high. Data on the clinical and economic impact of COPD in Kyrgyzstan are scarce. We aimed to evaluate the clinical characteristics, treatment patterns and socio-economic burden of COPD in five major hospitals in Kyrgyzstan as part of the FRESH AIR project.

Method:

A representative sample of patients with a spirometry-confirmed diagnosis of COPD ($FEV_1/FVC < 0.7$) was included. The majority of patients were registered in one of the five major hospitals in Kyrgyzstan: National Centre of Cardiology and Internal Medicine (Bishkek), National Hospital (Bishkek), Town Clinical Hospital number 6 (Bishkek), Osh Joint Regional Hospital (Osh) and Jalal Abad Regional Hospital (Jalal Abad). We interviewed patients on exposure to COPD risk factors, healthcare utilization and patient reported outcomes (EQ-5D, CCQ, MRC, WPAI). From the pulmonologist registries at the five hospitals, we randomly selected every 3rd patient until the required sample size was reached.

Results:

A total of 308 patients (mean age 62.1; 61.3% male; BMI 26.91) were included. 99.35% of the patients had health insurance. Biomass (coal, wood, dung) was used by 71.1% for heating and by 52.3% for cooking and 46% were current or ex-smokers. Mean FEV_1 was 45.85% (SD = 13.15), 71% had COPD GOLD III-IV and most frequent co-morbidities were cardiovascular diseases (55.19%), diabetes (8.44%) and gastritis (5.84%). The mean CCQ score was 3.12, MRC 3.74 and EQ-5D 0.68. Of the 14% that still worked, 64% missed workhours due to COPD. Yearly mean number of doctor's visit due to COPD was 2.94 (SD = 3.54) and 69.66% of the interviewed patients had to pay the medications themselves.

Conclusion:

The clinical and economic burden of COPD on patients and government in Kyrgyzstan is considerable. Notably, less than half were current or ex-smokers, but biomass exposure was high.

Clinical Trial Registry: NTR5759 FRESHAIR <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

Declaration of Interest: This study was funded by a research grant from European Union's Horizon 2020 research and innovation programme under grant agreement No 680997

Corresponding Author: Aizhamal Tabyshova Email: aljimon@mail.ru

CR-08. Demand for respiratory care in in Sri Lankan primary care

Ananda Perera¹, Shyamika Peries², Lavindi Peries²

¹St Joseph's Hospital, ²Ministry of Health

Aim:

To find the prevalence of respiratory symptoms in Sri Lankan primary care and to determine their significance in the demand for respiratory care

Method:

Using a computerized pro forma with 91 respiratory symptoms and signs for the diagnosis of possible 22 respiratory disorders commonly seen in primary care 12 primary care physicians entered data live into the computer. Prevalence was determined by the simple frequency distribution of the symptoms in the sample. Symptom significance in the demand for respiratory diseases were determined by z statistic and its significance on hypothesis testing. For hypotheses development 2 studies from primary care were selected (1,2)

Results:

Total sample was consecutive, unduplicated, unselected 500 patients who consulted their respective family physicians. The prevalence of cough was 86%, cold 69%, fever 58%, sorethroat 34%, hoarseness 28%, wheeze 22%, swallowing difficulty in 11% and dyspnea in 10%.

In an analysis of the respiratory symptoms which are more specific diagnostically recurrent cough was reported in 10%, cough with diurnal variation by 15%, recurrent cold, cough, wheeze by 18% and allergen triggers by 6%. z statistic with hypothesis testing for varying

levels of symptoms proportions in primary care showed that cough, cold and fever were reported by 70%, 40%, 50% respectively. On the other hand wheeze and dyspnea was reported by 20% and 10% respectively.

Conclusion:

The demand for respiratory care manifested mainly through cough, fever and cold. A minority also presented with wheeze and dyspnea.

Declaration of Interest:

The Computerized pro forma was a part of a expert system called CAMEOS designed and developed by the presenting author

References & Clinical Trial Registry Information

1) Hong CY, Lin RTP, Tan ESL, Chong PN, YSL Tan, Lew YJ, Loo LH. Acute respiratory symptoms in adults in general practice. *Fam Pract* 2004;21(3):317-323. DOI: <https://doi.org/10.1093/fampra/cmh319>

2) Seneviratne ALP de S, Samaranayake S, Parnavitana S, Piyasena KP, Siriwardene PR, Gamage A, Silva T. Respiratory morbidity in general/family practice. *Sri Lankan Family Physician* 2008;29:20-22.

Corresponding Author: Ananda Perera Email: bedeananda@gmail.com

CR-09. Diagnostic reasoning of Sri Lankan primary care doctors in the diagnosis of respiratory disease

Ananda Perera¹, Shyamika Peries², Lavindi Peries²

¹*St Joseph's Hospital,* ²*Ministry of Health*

Aim:

This study was undertaken to analyze the diagnostic reasoning of the Sri Lankan primary care physicians.

Method:

Computer Assisted Medical Evaluation of Symptoms - CAMEOS - is an expert system developed by the principal investigator of this study. The study focused on the respiratory disease diagnosis in Sri Lankan primary care. The system made the diagnoses based on the input of the symptoms and duration of symptoms and other illness data variables entered into the system. The data for the current study was taken from the CAMEOS output which is an html file (See figure). Out of all the extensive data generated per consultation only the differential diagnosis and the probability of the final diagnosis were the main focus for this study. See Fig 1 – 2.

Results:

The results are given under 2 headings namely diagnostic probability data (DPD) and the differential diagnosis data (DDD). DPD are as follows: minimum probability was 0 (no diagnosis) and the maximum was 1 (all the criteria in the knowledge base recorded). 50% interquartile value which statistically is the median was 0.63. 25% interquartile value and 75% interquartile values were 0.47 and 0.75 respectively. Which means the interquartile range is 0.28. That is most of the times the probability of diagnoses made by the system was 0.28. DDD are as follows: Minimum number in differential diagnosis list was 0 and the maximum was 13. 50% interquartile value which statistically is the median was 4. 25% interquartile value and 75% interquartile values were 3 and 7 respectively. Which means the interquartile range is 4. That is most of the times the number of differential diagnoses made by system was 4.

Conclusion:

The primary care physicians made respiratory disease diagnosis at a very low probability level and also the diagnostic process most of the time required consideration of at least 4 more respiratory diseases other than the main diagnosis made by the system.

Declaration of Interest:

Main author is the designer and the developer of the CAMEOS system for respiratory disease diagnosis in primary care

Corresponding Author: Ananda Perera Email: bedeananda@gmail.com

CR-10. Disease characteristics and treatment modalities among 964 Non Cystic Fibrosis Bronchiectasis patients in India: The India EMBARC registry

Raja Dhar¹, Sundeep Salvi², Sagar Chandrashekariah³, George D'souza⁴, Shrinivas Rajagopala⁵, Virendra Singh⁶, Rajesh Swarnakar⁷, Surya Kant⁸, Deepak Talwar⁹, Archana Baburao¹⁰, Aditya Jindal¹¹, Babaji Ghewade¹², Gayathri Devi HJ¹³, Girija Nair¹⁴, P A Mahesh¹⁵, Samir Gami¹⁶, Sushant Meshram¹⁷, Naveen Dutt¹⁸, Kaushik Saha¹⁹, Sneha Limaye², Stefano Aliberti²⁰, James Chalmers²¹

¹Fortis Hospital, ²Chest Research Foundation, Pune, ³Mazumdar Shaw Medical Centre, Bangalore, ⁴St. John's Medical College, Bangalore, ⁵PSG Institute of Pulmonary Medicine, Coimbatore, ⁶Asthma Bhavan, Jaipur, ⁷Get well Hospital and Research Centre, Nagpur, ⁸King George Medical University, Lucknow, ⁹Pulmonary and Critical Care Metro Group of Hospitals, Noida, ¹⁰Kempegowda Institute of Medical Sciences, Bangalore, ¹¹Jindal Clinics, Chandigarh, ¹²Jawaharlal Nehru Medical College, Wardha, ¹³MS Ramaiah College, Bangalore, ¹⁴DY Patil University School of Medicine, Navi Mumbai, ¹⁵JSS Medical College, JSS University, Mysore, ¹⁶Unique Hospital Multispecialty and Research Centre, Surat, ¹⁷B J Government Medical College, Sasoon General Hospital, Pune, ¹⁸All India Institute of Medical Sciences, Jodhpur, ¹⁹Burdwan Medical College, West Bengal, ²⁰University of Milano-Bicocca, Monza, Italy, ²¹College of Life Sciences, University of Dundee, UK

Aim:

The EMBARC India registry is an extension of the European EMBARC Registry started in 2012 to get better insights into its demographics, etiology, co-morbidities and treatment practices of Non Cystic Fibrosis Bronchiectasis in India.

Method:

18 investigator sites across India completed a web-based registry case report comprising of demographic details, risk factors, etiology, HRCT, Spirometry and treatment modalities over a period of 1 year.

Results:

Out of the 964 patients of Non CF Bronchiectasis registered with EMBARC India, 60.3% were males and 51.2% with a mean age of 52.6 ± 15.3 years. 41.6% patients have Bronchiectasis for 5 years. Cardio-vascular diseases (17%) and diabetes [15.8% (Type II 79.61%)] were the commonest associated co-morbidities. The type of Bronchiectasis on HRCT were 66% cystic Bronchiectasis, 41.2% cylindrical and 12.7% varicose. The commonest etiology was Post –TB (32.7%) followed by idiopathic (23.5%) and post-infective (22.51%). mMRC scores were highest in post-TB patients with Bronchiectasis (65.3%) versus post infective (48.2%) and idiopathic(47%) patients. 70.6% were never-smokers. The commonest inhaled prescriptions were ICS/ LABA combination (71.75%) followed by Tiotropium (22.54%) and LABA (22.11%). 241 patients (25%) were prescribed antibiotics, of which 55.2% received low-dose Macrolides (Azithromycin-31.1%), while cyclical antibiotic therapy was given to 29.4% patients. The commonest non-respiratory prescription was PPI (33%) followed by a Statin (8.6%).41.9% patients received pneumococcal vaccine. 44.1% received Influenza vaccine in last 1 year.

Conclusion:

EMBARC India Registry offers novel insights into the Non Cystic Fibrosis Bronchiectasis in India.

Declaration of Interest:

The authors have no interests to declare.

Corresponding Author: Raja Dhar Email: docaardee@yahoo.com

CR-11. Effect of structured Training for better quality Spirometry in Primary Care Setting

GM Monsur Habib¹, Kamrun Nahar², Farhana Habib³

¹Primary Care Respiratory Group; Bangladesh, ²Khulna Medical College Hospital, ³Bangabandhu Sheikh Mujib Medical University

Aim:

Spirometry is an essential test for the diagnosis, monitoring and day to day management of Asthma and COPD. A good quality spirometry is as important as availability of the test. Aim of this observational study is to evaluate the impact of structured training course on spirometry to a community respiratory center in Bangladesh.

Method:

The quality of spirometry before a 6-month training course from University of Washington (UW) in 2015 is compared with that after the completion of training. We started the training "Spirometry360" of UW from February to June 2015. During training period we have performed 3622 tests and after the completion of the training 10754 tests till May 2017. The tests were reviewed and graded by the reviewers of UW. The tests were graded as A, B, C, UC or NP as per the criteria of American Thoracic Society (ATS).

Results:

During our training period 3622 tests were done of which grade A,B and C were considered as clinically useful. Useful tests improved from 85% (779/914) to 91% (488/538) ($p<0.01$). Over the course of the study, with grade A tests increasing from 66% (599/914) to 77% (416/538) ($p<0.001$). After the training useful tests improved to 88% (9430/10754) with grade A 71% (7603/10754) which was 66% before training.

Conclusion:

Implementation of an online training (e-learning) with feedback system improve quality of spirometry in a busy community respiratory clinic in Bangladesh. The training also strengthen the confidence and quality of care of chronic respiratory disorders like Asthma and COPD

Declaration of Interest:

None

References & Clinical Trial Registry Information

On request

Corresponding Author: GM Monsur Habib Email: gmmhabib@gmail.com

CR-12. Exploring the Role of South Asian Culture on Asthma Self-Management Behaviour

Salina Ahmed¹, Stephanie Taylor¹, Hilary Pinnock², Liz Steed¹

¹Queen Mary, University of London, ²The University of Edinburgh

Aim:

Self-management strategies (action plans and professional support) improve asthma outcomes, though interventions promoting self-management are less effective in South Asian communities. Guidelines recommend that interventions should be culturally relevant, but culture is not static; UK born South Asians have greater cultural flexibility compared to the first migrant generation, indicating differences in asthma needs and preferences. We aimed to understand how to support people from different South Asian subcultures, generations and acculturation level (i.e. cultural changes from encountering another culture) to self-manage their asthma better.

Method:

We conducted semi-structured interviews with 31 Bangladeshi and Pakistani asthma patients from different generations (first to fourth), recruited from primary and secondary/tertiary care settings. Patients unable to read, write or speak in English were given a translated, audio-recorded patient information sheet. Data were analysed thematically with the emic-etic perspective of cultural interpretation.

Results:

All patients used similar self-management strategies, including; religious activities e.g. prayer, remedies related to hot and cold beliefs e.g. dressing up warm or avoiding cold food, and some patients referred to cleansing beliefs e.g. 'sweating out' asthma. Most first-generations had not received an asthma action plan, whereas other generations received some form of action plans (written, verbal or a short-term emergency plan). Various forms of acculturative stress (i.e. cultural stress from being in a new environment) were found e.g. the first-generation had problems adjusting to their poorer UK lifestyle, whereas other generations had relationship conflicts and difficulty negotiating their asthma needs against traditional expectations of family/older generations. Most patients reported support from secondary care was more important than other services for managing their asthma.

Conclusion:

There are differences in asthma self-management needs, and interventions need to be tailored to these unique sociocultural dimensions (subcultures, generational status and acculturation) e.g. pictorial action plans for the first generation; recognising and addressing various forms of acculturative stress across generations. Research needs to explore how primary and secondary services can work together to improve asthma care for these communities.

Declaration of Interest:

None.

Corresponding Author: Salina Ahmed Email: salina.ahmed@qmul.ac.uk

CR-13. Health economic burden of asthma/COPD in Greek primary care patients in the austerity period: the FRESH AIR project

M. Anastasaki¹, V. Chatzea¹, D. Sifaki-Pistolla¹, A. Bertias¹, I. Tsiligianni¹, C. Lionis¹, M. Postma², J. van Boven³
¹University of Crete, ²University of Groningen, ³University Medical Center Groningen, ARTEG

Aim:

The economic impact of asthma and COPD is significant in terms of both direct (drugs, hospitalizations) and indirect (productivity loss) costs. This study explores the economic burden of asthma and COPD on primary care patients in Crete, Greece where relevant data are scarce.

Method:

This cross-sectional study enrolled 100 asthma/COPD patients recruited consecutively in 10 rural primary care units (PCUs) in the county of Heraklion, Crete. A questionnaire including information on socio-demographic and clinical characteristics, healthcare utilization, costs and work productivity and impairment was administered to patients by general practitioners (GPs) serving in the selected PCUs.

Results:

In total, 27% of the participants had asthma, while 81% had COPD. Mean age was 70.4 years (SD: 12.1), 60% were male and 61% were retired. Among patients still working (n=8), 63% reported reduced productivity due to asthma/COPD. Mean monthly income was €543 (SD: 282), while 96% had health insurance. On average, patients visited a GP 1.6 (SD: 1.5) times the last three months, with 93% of visits being reimbursed. Mean co-payment per visit, if not reimbursed, was €33 (SD: 6.0). Patients visited a pulmonologist 0.6 (SD: 0.9) times on average the last three months, with 63% of visits being reimbursed. Mean co-payment per visit, if not reimbursed, was €37 (SD: 11). A total of 92% reported using any respiratory medication which was reimbursed 76% of the time. If not reimbursed, mean monthly cost was €27.

Conclusion:

A proportion of healthcare utilization and medication costs remains uncovered by social insurance, creating a substantial economic burden for asthma/COPD patients in Crete. In a period of austerity, these results may serve as indicators to increase awareness on the public health issue of chronic respiratory diseases and inform future policies and interventions.

Clinical Trial Registry: NTR5759 FRESHAIR <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

Declaration of Interest: This study was funded by a research grant from European Union's Horizon 2020 research and innovation programme under grant agreement No 680997

Corresponding Author: M. Anastasaki Email: anastasakimarilena@yahoo.gr

CR-14. Health economic burden of asthma/COPD in Vietnam – a FRESH AIR study

Evelyn Brakema¹, Luan Nguyen Thanh², Marise Kasteleyn³, Rianne van der Kleij³, Birgit Hasenack³, Quynh Nguyen Nhat², Vuong Nguyen Lam², Tuan Diep Tran², Vinh Nguyen Nhu², Maarten Postma⁴, An Le Pham², Niels Chavannes³, Job van Boven⁴
¹LUMC, ²University of Medicine and Pharmacy, Ho Chi Minh, ³Leiden University Medical Center, Leiden, ⁴University of Groningen; ARTEG

Aim:

Health economic data on the burden of asthma/COPD in Vietnam are lacking. We therefore aim to explore the clinical and economic burden of chronic lung disease (CLD), i.e. asthma/COPD, in Vietnam. This could guide cost-effectiveness evaluations of future CLD interventions, which in turn facilitate decision making in policy- and health interventions, and consequently contribute to improved lung health.

Method:

This is a sub-study of the European Horizon 2020 project 'FRESH AIR', an implementation science project targeting CLD in low-resource settings. Clinical- and economic burden were calculated bottom-up with a standardised questionnaire, conducted in a representative sample of 491 in- and out asthma/COPD patients, from five hospitals in Ho Chi Minh City. We collected data on socio-economic parameters, healthcare utilisation and co-payments, work productivity (WPAI), and health status (mMRC, CAT, EQ-5D). Questionnaire data were enriched with data from patients' clinical records (spirometry, comorbidities, treatment).

Results:

Mean age was 60.5 (SD 16.2), 42% were male. Mean FEV₁% predicted was 56.6% (SD 25.1). Mean monthly income was equivalent to €138 (SD €294); 29% was currently formally employed, 87% had a health insurance, and 4% a disability status. If not reimbursed, the individual direct CLD-related costs per category in the past six months ranged from €12.16 (SD €23.08) for visits to a pulmonologist to €170 (SD €363.96) for a stay at the intensive care unit. Missing work hours due to CLD was reported by 36%, 66% reported productivity loss, and the mean effect on daily non-work activities was 3.5/10 (SD 3.0). Mean scores for mMRC, CAT and EQ-5D were 1.58 (SD 1.20), 13.5 (SD 9.3) and 0.74 (SD 0.26) respectively.

Conclusion:

CLDs are responsible for considerable clinical- and economic burden in Vietnam. These data could serve the development of national strategies on preventing and treating CLDs.

Clinical Trial Registry: NTR5759 FRESHAIR <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

Declaration of Interest: This study was funded by a research grant from European Union's Horizon 2020 research and innovation programme under grant agreement No 680997

Corresponding Author: Evelyn Brakema Email: e.a.brakema@lumc.nl

CR-15. Impact of Pulmonary Rehabilitation in Resource Poor Setting

Kamrun Nahar¹, Farhana Habib², Monsur Habib³

¹*Khulna Medical College Hospital*, ²*Bangabandhu Sheikh Medical University*, ³*Community Respiratory Clinic Khulna*

Aim:

Pulmonary Rehabilitation is one of the key components of the care of chronic respiratory diseases. In Bangladesh this was the first attempt to implement Pul Rehab in a resource poor model. Aim of the study is to measure the impact of pulmonary rehabilitation in resource poor setting like Bangladesh.

Method:

As Pul Rehab is the new intervention both in primary, secondary and tertiary care service, we decided to measure the impact and acceptability of the intervention among the people with chronic respiratory diseases. Since August 2016, we registered patients with COPD, ACOS, Asthma and ILD to a Pul Rehab center (PulmoFit) in Community Respiratory Clinic Khulna (CRCK-BD). To date we registered over 800 patients. We visited a Pul Rehab center in Mumby and followed their model. Our outcome measurement tool was CCQ. At the beginning we evaluated 100 patients as a pilot project to measure the change 2 weeks after intervention. As per the resource poor setting protocol we conducted one day program in PulmoFit and after 2 weeks we measured the outcome by CCQ over telephone.

Results:

Initial and follow up outcome measurement of CCQ was done by CCQ measurement calculator. We found the improvement of all the components of CCQ i.e. Total Score (TS), Symptom Score (SS), Mental State Score (MS) and Functional State Score (FS). The SPSS analysis of the measurement is inserted

Conclusion:

Pulmonary rehabilitation is effective in resource poor setting with the adopted protocol such as home exercise program. We need to conduct a large scale study to establish the initial experience and that is under investigation.

Declaration of Interest:

Nothing

Corresponding Author: Kamrun Nahar Email: drnahar.nahar7@gmail.com

CR-16. Knowledge and perception of asthma and asthma treatment among Chinese school children with asthma in Malaysia

Siti Nurkamilla Ramdzan¹, Ping Yein Lee², Ai Theng Cheong², Ee Ming Khoo¹, Nik Sherina Hanafi¹, Hani Syahida Salim², Nursyuhada Sukri¹, Su May Liew¹, Norita Hussein¹, Julia Suhaimi¹, Azainorsuzila Mohd Ahad³, Hilary Pinnock⁴
¹University of Malaya, ²University Putra Malaysia, ³Ministry of Health, Malaysia, ⁴University of Edinburgh

Aim:

To explore the knowledge and perception of asthma and asthma treatment among Chinese school children with asthma.

Method:

This is a qualitative study conducted among primary school children of Chinese ethnicity with asthma in Malaysia. Children previously diagnosed with asthma were identified using a screening questionnaire from two suburban primary schools. Informed consent was obtained from parents or caregivers for children's participation in the study. Two trained researchers conducted two focus group discussions and four in-depth interviews using a semi-structured topic guide that was developed based on literature review and Biopsychosocial model. All interviews were conducted in Mandarin, audio-recorded, transcribed verbatim and translated into English and checked for accuracy. The transcripts were analysed using the thematic approach.

Results:

A total of ten children were interviewed, aged between 9 and 12 years. Three themes emerged from the analysis 1) knowledge of asthma was confined to asthma symptoms from self experience; 2) asthma self-management skills were poor or non-existent particularly at school and 3) there were many misperceptions regarding asthma and its treatment. For example, that asthma is caused by infection and is contagious; that an injection is needed to treat an attack.

Conclusion:

Children of Chinese ethnicity with asthma had poor knowledge and misperceptions of asthma and its treatment. Education is needed for better understanding and self-management of asthma.

Declaration of Interest:

This study was conducted with a research grant from the International Primary Care Respiratory Group (IPCRG).

Corresponding Author: Siti Nurkamilla Ramdzan Email: sitinurkamilla@um.edu.my

CR-17. Level of knowledge and its impact on attitude and practices in asthmatic patients in India

Jyoti Londhe, Sapna Madas, Komalkirti Apte, Sundeep Salvi
Chest Research Foundation

Aim:

Adequate knowledge and a positive attitude are important prerequisites for optimal asthma management. However, there is paucity of data regarding this in India. We aimed to assess the knowledge of asthmatics and study its impact on their attitude and practices

Method:

Asthmatic patients with a diagnosis for at least one year attending the clinics of 127 primary care physicians in Pune city were invited to participate in this interviewee-administered questionnaire survey. Knowledge about asthma was assessed on four points, viz: which organ was affected, what happens in the airways, risk factors and presenting symptoms. Each correct point was given a score of 1. Those asthmatics who had a total asthma knowledge score of ≤ 2 were labelled to have inadequate knowledge (IK) and those greater than 2 were labelled to have adequate knowledge (AK). Differences in attitude and practices were analyzed using chi square test.

Results:

480 asthmatics participated in the study of which 295 (61.5%) were males. The average age of the patients was 45 ± 17 years. A mean total knowledge score of the patients was 1.45 ± 1.03 (out of a total of 4). There were significant differences in the attitude towards asthma and practices about asthma between the group with inadequate knowledge about asthma and the group with adequate knowledge of asthma. Knowledge regarding the organ affected in asthma had the maximum impact on the attitude towards the disease while knowledge regarding the organ involved, the pathophysiology and the symptoms had an impact on the practices towards asthma management.

Conclusion:

Knowledge about asthma is inadequate among asthmatic subjects in India. Inadequate knowledge has a significant impact on both attitude towards asthma as well as practices about asthma. Not knowing the organ affected in asthma had the greatest impact on attitude towards asthma. Cost of asthma treatment was of less importance among the asthmatic subjects with adequate knowledge as compared to those with inadequate knowledge.

Declaration of Interest:

The authors have no interests to declare.

Corresponding Author: Jyoti Londhe Email: jyotid@crfindia.com

CR-18. MORBIDITY SPECTRUM OF RESPIRATORY DISORDERS SEEN IN PRIMARY CARE IN SRI LANKA

Ananda Perera¹, Ananda Perera², Shyamika Peries³, Lavindi Peries³
¹St Joseph's Hospital, ²St Joseph's Hospital (Pvt) Ltd, ³Ministry of Health

Aim:

To study the frequency distribution of respiratory diseases in Sri Lankan primary care

Method:

Respiratory diagnosis was made by an expert system (CAMEOS - Computer Assisted Medical Evaluation of Symptoms) designed and developed by the principal investigator. The system can diagnose 22 common respiratory diseases seen in primary care. 12 board certified or eligible primary care physicians and senior registrars entered data. They were to focus only on respiratory presentations only. Their main role was to collect the respiratory symptoms, signs and the illness data including the duration. CAMEOS is a web application with backend servers running the CAMEOS algorithms. For each respiratory disease at least 5 peer reviewed articles were consulted to build the knowledge base of the expert system. Data collected in the screenshots Fig 1 - 3 were used for data analysis.

Results:

The frequency distribution of the respiratory diseases in the sample (N=500) was URTI 49%, acute bronchitis 6%, acute viral infections 6%, asthma 14%, tonsillitis 1%, allergic rhinitis 1%. The frequency distribution of the respiratory diseases duration was few days in 66%, few weeks 15%, few months in 25%, few years 16%. A surprising observation was that 23% of all diseases had a duration of less than 1 day of symptoms. This number excludes the 1 day symptom of exacerbation of chronic respiratory diseases.

Conclusion:

Using the well defined evidence based criteria for the diagnosis of respiratory diseases based on the symptom and duration input by the primary care physicians showed the commonest respiratory diseases in primary care was URTI, then in sequence acute bronchitis, acute viral infections, asthma, tonsillitis and allergic rhinitis in descending order. Comparative studies in different communities is possible now with this diagnostic tool.

Declaration of Interest:

Author is the developer of the CAMEOS which was the main study instrument for data collection

Corresponding Author: Ananda Perera Email: bedeananda@gmail.com

CR-19. Prevalence of Asthma and COPD Overlapping Syndrome (ACOS) in a busy primary care setting of Bangladesh.

GM Monsur Habib¹, Kamrun Nahar², Farhana Habib³

¹Primary Care Respiratory Group; Bangladesh, ²Khulna Medical College Hospital, ³Bangabandhu Sheikh Mujib Medical University

Aim:

Asthma is associated with many other comorbidities in Bangladesh, among them ACOS deserves special attention because of its nature of aggravating each condition when stay together. The prevalence study of ACOS in a busy community respiratory clinic gives us the idea that we should need to have a more structured guideline to care the patients in such resource poor setting.

Method:

We have analysed the electronic data of community respiratory clinic, Khulna (CRCK) from 4 January 2016 to June 1, 2017. Three folders of registered patients were included in the study with all the age range in CRCK. We have graded the ACOS as A, B, C and D according to their onset and nature.

Results:

A total of 7613 patients were included in the study with male 3876 and female 3727 with age range from infancy to 80 years i.e. all age range. The prevalence of ACOS among these patients was 11.6% (881/7613). Among them ACOS A 8.6% (76/881), B 74.5% (656/881), C 14% (124/881) and D 2.8% (25/881). In the first folder of the patients the prevalence was 7.83% (235/3001), when there was diagnostic dilemma of ACOS.

Conclusion:

ACOS is increasing in primary care respiratory service in Bangladesh, which may be due to increase awareness and confidence in the diagnosis. It deserves special attention to develop a good practice protocol for the same.

Declaration of Interest:

None

References & Clinical Trial Registry Information

Available on request

Corresponding Author: GM Monsur Habib Email: gmmhabib@gmail.com

CR-20. Qualitative evaluation of a pulmonary rehabilitation programme in Greece: results from the FRESH AIR project

Jillian Pooler¹, Ioanna Tsiligianni², Maria Trigoni², Marilena Anastasaki², M Trouli², A Pantouvaki², M Mavrogianni², Christos Lionis², Rupert Jones³

¹Plymouth University, *Peninsula Schools of Medicine and Dentistry*, ²University of Crete, ³University of Plymouth

Aim:

This study aims to qualitatively evaluate a six-week pulmonary rehabilitation (PR) programme, involving exercises and education for patients with chronic respiratory diseases (CRDs), established in a primary healthcare center in rural Crete, Greece.

Method:

Theoretical input from the Health Belief Model has been utilised to guide the study. In-depth interviews were performed to 6 purposively selected patients, pre and post PR, to explore CRDs' impact on every-day life, expectations, barriers, potential PR improvements and sustainability. A focus-group including the PR supervising team and certain stakeholders was also conducted to assess programme's implementation and adaptation. All activities were audio-taped, transcribed verbatim and analysed using thematic content analysis.

Results:

Before PR, patients had knowledge and recognized the symptoms of their disease. Although most were physically active, all reported significant functionality restrictions due to breathlessness and cough. Their expectations from the programme included overall health improvement and less medication dependence. Patients positively assessed the programme, noting the significant symptoms' reduction and the benefits of education on disease self-management. The opportunity for socializing while improving health was mentioned by both patients and stakeholders as a major component enhancing participation. For patients, barriers to attending PR mainly concerned daily responsibilities, in contrast to stakeholders who indicated transportation issues respectively. Improvements suggested by patients included programme's personalization according to age and enrichment of exercises and equipment. Stakeholders identified timely information and comprehensive GPs' referral as core elements for optimal recruitment. Patients reported maintaining PR at home and stressed the necessity of implementing similar programmes in remote areas.

Conclusion:

In a period of austerity, these results highlight that evidence-based and low-cost PR programmes may constitute a feasible, acceptable and effective approach against CRDs in primary care.

Clinical Trial Registry: NTR5759 FRESHAIR <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

Declaration of Interest: Co-author Dr. I. Tsiligianni serves as IPCRG president-elect. This study was funded by a research grant from European Union's Horizon 2020 research and innovation programme under grant agreement No 680997. This is an encore abstract previously presented at the IPCRG Slovenia 2017.

Footnote: Presented data are only preliminary results of the European Horizon 2020 FRESH AIR (Free Respiratory Evaluation and Smoke-exposure reduction by Primary Health Care Integrated Groups) project. They offer a description of observations documented during PR implementation. FRESH AIR is a three-year implementation science project to improve prevention, diagnosis and treatment of CRDs in low resource settings. It is the first time that this abstract is being submitted to an international scientific meeting.

This is an encore abstract previously presented at the IPCRG Slovenia 2017

Corresponding Author: Jillian Pooler Email: jillian.pooler@plymouth.ac.uk

CR-21. Quantitative evaluation of a pulmonary rehabilitation programme in Greece: results from the FRESH AIR project.

Rupert Jones¹, Ioanna Tsiligianni², Antonios Bertsias², Christos Lionis², Jill Pooler³, Marilena Anastasaki², Andrew Barton³
¹Plymouth University, ²University of Crete, ³University of Plymouth

Aim:

Despite the rising burden of chronic obstructive pulmonary disease (COPD) and grade A evidence to support pulmonary rehabilitation (PR), there is virtually no PR in hospitals and none in the community in Greece. The aim was to measure the impact of a six-week pulmonary rehabilitation (PR) programme on quality of life and exercise capacity for patients with chronic respiratory diseases (CRDs). The programme was established in a primary healthcare centre in rural Crete, Greece.

Methods:

Patients were recruited from primary care with chronic lung diseases, including COPD. Suitable patients were invited take part in a six-week, twice-weekly programme of exercise and education on CRD and its causes, and self-management education. The programme was run in a rural clinic with patients referred by GPs; the team included GPs, nurses and physiotherapists. Outcome measures included the Clinical COPD questionnaire (CCQ)¹ the COPD Assessment Test (CAT)² and the St George's Respiratory questionnaire (SGRQ)³; depression was measured by the patient health questionnaire 9 (PHQ9); exercise capacity was measured by the incremental shuttle walking test (ISWT). Data were collected at baseline the end of rehabilitation and six weeks after completing.

Results:

In three groups, 31 patients completed the programme and six-week follow-up. 52% male, mean age was 67.5 years, 16% current smokers. The primary diagnosis was 32% COPD, 29% asthma, 39% other. The mean FEV1 was 1.8, mean, FEV1% predicted was 79%. Improvements in all outcomes variables were seen (Table 1).

[CR-21] Table 1. Results of test of exercise capacity and quality of life questionnaire scores before and after PR

	ISWT (metres)	CCQ	CAT	SGRQ	PHQ9
Baseline	257.5 (91.2)	16.1 (5.75)	16.3 (7.76)	43.6 ((17.2)	4.7 (4.69)
End of PR	314 (151.4)	10.6 (7.27)	10.2 (5.43)	20.3 (13.6)	3.6 (3.5)
Change	56.5	-5.5	-6.1	23.3	-1.1
Clinically important difference	48	-0.4	-2	4	-5

Conclusion:

In a period of austerity, these results highlight that evidence-based and low-cost PR programmes may constitute an effective approach to improve patient related outcomes for people with CRD in primary care.

Clinical Trial Registry: NTR5759 FRESHAIR <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

Declaration of Interest: Dr. I. Tsiligianni serves as IPCRG president-elect.

References:

1. van der Molen T, Willemse BW, Schokker S, et al. Development, validity and responsiveness of the Clinical COPD Questionnaire. *Health QualLife Outcomes* 2003;1(1):13.
2. Jones PW, Harding G, Berry P, et al. Development and first validation of the COPD Assessment Test. *European Respiratory Journal* 2009;34(3):648-54. doi: 10.1183/09031936.00102509
3. Jones PW, Quirk FH, Baveystock CM, et al. A self-complete measure of health status for chronic airflow limitation. *Am Rev Respir Dis* 1992;145:1321-27.

CR-22. Respiratory Symptoms and pulmonary functions among school teachers exposed to chalk dust in Colombo district Sri Lanka

Joseph Mithraka Perera¹, Savithri. W Wimalasekera²

¹Faculty of Medicine, University of New South Wales, Australia, ²Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura

Aim:

Chalk and board is the most traditional method used in schools for teaching purposes in developing countries like Sri Lanka. Chalk dust is composed of calcium carbonate, a known chemical causing allergic reactions in the respiratory system, skin and eyes. Entry of chalk dust to the respiratory system through nasopharyngeal region and mouth can be extensive among school teachers because of the close proximity to the board when writing on the black board and when opening the mouth during speech. The objectives of the study were to determine the frequency of respiratory symptoms and respiratory functions amongst school teachers, and to determine the association between duration of exposure to chalk dust with pulmonary function tests in this group.

Method:

A comparative study was conducted on 133 teachers exposed to chalk dust and 71 controls matched for anthropometric variables. Respiratory symptoms were determined using a questionnaire and all were clinically examined. Respiratory functions were assessed using a Vitalograph spirometer (Vitalograph 6800 Pneumotrac). Respiratory functions of the study group were compared with a matched control group (SPSS statistical package version 13)

Results:

There was no significant difference in prevalence of symptoms such as wheezing, dyspnoea and cough between the two groups. All lung function parameters (Forced Vital Capacity (FVC), Forced Expiratory Volume in the 1st second, (FEV₁), FEV₁/FVC, and Vital capacity (VC) were significantly decreased in teachers compared to matched controls ($p < 0.05$)

Conclusion:

School teachers using chalk are at increased risk of developing occupational related pulmonary impairment. These deficits may not be detected early as they may be asymptomatic. Measures to control health effects following exposure to chalk dust in the school teaching environment needs to be urgently addressed. Use of other dust free teaching aids instead of chalk should be encouraged as a preventive measure.

Declaration of Interest:

None

Corresponding Author: Joseph Mithraka Perera Email: m.perera@student.unsw.edu.au

CR-23. Role of Spirometry in ACO diagnosis

Lan Le
Community Health Care Center

Aim:

To study the role of spirometry in ACO diagnosis

Method:

Review the medical records of asthma, COPD and ACOS to find out the process to make these diagnosis

Results:

There are many types of spirometric test results at the first visit and the following ones of Asthma and COPD patients.

- 1 – In finding ACO patients, only the obstruction spirometric tests will be chosen.
- 2 – The bronchodilator test will exclude patients who have obstruction but completely reversible: Asthma
- 3 – The incompletely reversible will be treated and we will exclude who have obstruction completely reversible after one or many courses of treatment: Asthma
- 4 – With those remains obstructed after maximal treatment for at least 6 months we will have:
 - COPD if obstruction and negative bronchodilator test
 - ACO on the basis of Asthma, if the patient have history of asthma but
 - Undertreated or
 - Smoking or
 - Occupation exposure
 - ACO on the basis of COPD if
 - Obstruction but positive bronchodilator test and remains obstructed after treatment
 - Responses with ICS but remains obstructed

Conclusion:

The ACO diagnosis could be made only after many spirometric tests and treatment courses.

Declaration of Interest:

I have receive honorarium and grants for research from Astra Zeneca, GSK, Novartis, Boehringer ingelheim, MSD, Pfizer

References & Clinical Trial Registry Information

None

Corresponding Author: Lan Le Email: tuyetlanyds@gmail.com

CR-24. Sleep and breathing Problem in primary care respiratory service

GM Monsur Habib¹, Kamrun Nahar², Farhana Habib³

¹Primary Care Respiratory Group; Bangladesh, ²Khulna Medical College Hospital, ³Bangabandhu Sheikh Mujib Medical University

Aim:

Although sleep and breathing has a huge burden in Primary Care Respiratory Service (PCRS) in resource poor setting well-validated measurement of it is not conducted yet. Sleep is still considered by general population as well as health professionals as merely a 'down time' when their brain shut off and their bodies rest. World has been changed a lot with non-stop "24/7" nature. People are continuously resetting their "Biological clock" for the same. Respiratory diseases impose an extra burden on this. We have conducted a survey in a community respiratory center on the nature and burden of sleep disorders among the people with respiratory problem. Sleep affects breathing and breathing problem also has an impact on sleep.

Method:

We have collected data from our electronic clinic database from the date: 11-6-2016 to 25-5-2017. A total of 4553 patients were registered during this time with 6212 consultation. We have taken their sleep history as a part of our routine history taking. Primarily they were divided into normal sleep or disturbed sleep.

Results:

A total of 4553 patients (2281 male and 2272 female) were in the study (M:F = 1:1). During the study period there were 6212 consultation with those patients and every time sleep status was asked. 4353 (70%) patients have normal sleep and 1859 (30%) have sleep disordered breathing.

Among the disturbed sleep patients the following variety were diagnosed later on: Insomnia (difficulty in falling and staying asleep), Sleep Apnoea (pauses in sleep with or without snoring), restless leg syndrome, narcolepsy (extreme daytime sleepiness), and parasomnias (abnormal sleep behavior).

Duration of sleep is an important factor as well. People's perception on the duration of sleep is also varies widely. Usually there is a recognized recommended duration of sleep per day in different age groups, (e.g. newborn 16-18 hrs; pre-school 11-12 hrs; school age at least 10 hrs and adult 7-9 hours)

Conclusion:

Burden of sleep and breathing is imposing an increasing burden to the primary care respiratory practice the resource poor setting. Although there are some initiative from the secondary or tertiary care level, primary care setting is still in the dark zone in the issue. It is the time to be aware and take necessary action to address the burden properly.

Declaration of Interest:

Nothing

References & Clinical Trial Registry Information

To be provided on request

Corresponding Author: GM Monsur Habib Email: gmmhabib@gmail.com

CR-25. Spirometric values of healthy Sri Lankan Tamil children aged 14 to 20 years in Northern Province of Sri Lanka: A preliminary results

Mathanki Balasubramaniam¹, S W Wimalasekera², K Sivalpan³

¹University of Jaffna, ²Dept. of Physiology, Faculty of Medical Science, University of Sri Jayewardenepura, ³Dept. of Physiology, Faculty of Medicine, University of Jaffna

Aim:

Ethnic specific reference equations are important in interpreting lung function parameters in clinical practice. There are no data on normal lung function parameters for the Sri Lankan Tamils ethnic group living mainly in the Northern Province of Sri Lanka. The objective is establish reference equations for lung function parameters of Sri Lankan Tamils in Northern Province of Sri Lanka.

Methodology:

A population based descriptive study was carried out in all 5 districts in Northern Province. Healthy subjects (316 males, 232 females) were selected by cluster sampling method. Age, standing height, sitting height, weight, arm span and mid arm circumference, were measured of all subjects. Respiratory function was assessed by a Wright compatible peak expiratory flow meter (PEFR) and by spirometer (Cosmed Micro Quark, Italy).

Results:

Mean, standard deviation of Vital Capacity (VC), Forced Vital Capacity(FVC),Forced Expiratory Volume in the first second(FEV₁) FEV₁ %and Peak Expiratory Flow Rate(PEFR) were 3.32± 0.7 L,3.44± 0.7L, 3.01 ± 0.6 L,88.2± 5 %, 402± 80 L/sin males. In females the respective parameters were2.58± 0.4 L, 2.69± 0.43 L, 2.44± 0.37L, 90± 5%, 319±50 L/s.

The VC, FVC, FEV₁ and PEFR have significant (p<0.05) positive correlations with all measured anthropometric characters. Pearson's' correlations were higher in males than females. Step wise multiple regression analysis revealed prediction equations.

Conclusion:

This study generates data on lung function parameters of Sri Lankan Tamil ethnic group which will be useful in clinical practice to determine respiratory dysfunction.

[CR-25] Table 1: prediction equations

Parameter (sex)	Equation
VC (Males)	0.41 height + 0.07 age + 0.013 weight- 3.859
VC (Females)	0.34 height + 0.013 weight- 3.368
FVC (Males)	0.44 height + 0.102 age + 0.012 weight- 6.174
FVC (Females)	0.030 height + 0.032 mid arm circumference +0.012 arm span+4.848

Corresponding Author: Mathanki Balasubramaniam Email: bsmmathanki@gmail.com

CR-26. The derivation and plan of validation of a new questionnaire in severe asthma: The Severe Asthma Quality of Life (SAQoL) questionnaire.

Rupert Jones¹, Michael Hyland², Joseph Lanario², Matthew Masoli³
¹Plymouth University, ²University of Plymouth, ³Plymouth Hospitals NHS Trust

Aim:

The health deficits experienced by patients with severe asthma differ from those with mild-to-moderate asthma. The existing asthma questionnaires fail to take into account the issues which are important to patients with severe asthma who have unpredictable life-threatening attacks which disrupt work and family life. Long-term oral steroid treatments are often needed to control disease but have profound adverse effects on mood, weight gain, appearance, metabolism, and bones.

Our aim was to generate a questionnaire that captures the impact of severe asthma on patients' lives, including the burden of treatment.

Method:

This questionnaire was primarily derived from patient input from in-depth interviews to define the key concepts to be addressed, and a series of iterative focus groups to determine the wording and scoring and input from a panel of UK (from the BTS severe asthma network) and international experts.

Results:

In-depth interviews were held in a sample of 23 patients attending the difficult asthma service at Derriford Hospital. The main health deficits and burden of treatment were defined and compared to existing questionnaires¹. The Severe Asthma Questionnaire (SAQ)² was derived from this data and was evaluated by the panel of experts. The concepts and wording were modified and tested in an iterative series of four focus groups. The questionnaire is now being field tested in 100 patients and compared to the Mini Asthma Quality of Life Questionnaire (miniAQLQ)³, the Asthma Control Test⁴ and clinic data including lung function and health care consumption. The final version will follow the quantitative assessment and input from the panel of experts. The questionnaire has 16 questions rated on a 1-7 Likert scale and on a 0-100 scale rating of (i) overall quality of life; (ii) how your asthma symptoms and the side effects of your medicines have affected your quality of life during the last two weeks.

Conclusion:

The SAQoL is a new patient-derived questionnaire to assess the impact of severe asthma and its treatment for use in clinical practice and trials. In order to further evaluate its performance, a series of projects are in development, including assessment of sensitivity to change before and after exacerbations and treatment; test-retest validation; testing versus clinical data in multiple UK and international centres (www.saqol.org.uk).

Declaration of Interest:

The funding for this project was from Astra Zeneca

Corresponding Author: Rupert Jones Email: rupert.jones@plymouth.ac.uk

References:

1. Hyland M, et al. *Qual Life Res* 2015; **24.3**: 631.
2. The Severe Asthma Questionnaire. SAQ; 2017. Accessible: <http://saq.org.uk/default.aspx>
3. Juniper E, et al. *Eur Respir J* 1999; **14.1**: 32-38.
4. Nathan RA, et al. *The Journal of Allergy and Clinical Immunology* 2004;113:59-65.

CR-27. The effectiveness of a metered dose inhalation technique education package

Kumaran Subaschandren
Faculty of Medicine, Jaffna

Aim:

Aim was to determine the effectiveness of a Metered Dose inhalers inhalation technique education package- leaflet and a video clip.

Method:

The technique education package was formulated by the prime investigator with help of an expert panel. Its effectiveness was assessed by before and after study design with 302 Asthma and COPD patients, selected by Systematic random sampling in a chest clinic Jaffna. The study instruments were Interviewer administered questionnaire and check list. McNemar test was used to assess the effectiveness of the education package and Chi squared test was used to identify any significant association factors with inhalation technique. Ethical clearance was obtained from the Ethical Review committee, Faculty of Medicine, Jaffna.

Results:

70% were females, and 50% were above age 60 years. More than 70% had their primary education and 50% were living with their life partners. 30 % were with co morbidities and 70% were on MDI for one year or more while 20% had used other types of inhalers. Patient education (p value 0.003) and being on more than two types inhalers (p value 0.003) were found to be statistically significant association factors with inhalation technique. The incorrect inhalation technique before education was 94% and one month after was 80%. The reduction was statistically significant ($p < 0.001$).

Conclusion:

Patient education level and the usage of other type of inhalers were statistically significant associated factors. The technique was improved by 14% after a month of education which MDI can be considered as effective.

Declaration of Interest:

None.

Corresponding Author: Kumaran Subaschandren Email: s.kumaran3@gmail.com

CR-28. Treatment compliance among adult asthmatic patients: Experience from a Base Hospital in the Western Province in Sri Lanka

Nazneen Nazeer¹, Sampatha Goonewardena²

¹Post Graduate Institute of Medicine, Sri Lanka, ²Faculty of Medical Sciences, University of Sri Jayawardenapura, Sri Lanka

Aim:

To determine treatment compliance and its associated factors among adult asthmatic patients attending medical clinic in Base Hospital Homagama.

Method:

Descriptive cross sectional study was conducted among 374 adult asthmatic patients 18 years and above applying systematic sampling. Interviewer administered questionnaire and a checklist were used to collect data. Compliance was assessed using Preventer/Controller inhalers by comparing inhaler dosing frequency as per the prescription with inhaler user frequency as stated by the patient. Chi square test performed to assess associations.

Results:

Mean age of the respondents was 52.3± 11.7SD years and comprised mainly of females (56%; n=205). Good treatment compliance was demonstrated in 65% (n=208) of patients. A great proportion had poor inhaler technique (76.7 %; n=23/30). Younger age, being female and higher educational and income levels were significantly associated with good compliance (p<0.05). Perception of susceptibility, belief on severe consequences and believing therapy is effective and beneficial were positively attributed to compliance (p<0.05). Erroneous beliefs of diminished effectiveness and fear of dependence with long term treatment, believing asthma was uncontrollable contributed to poor compliance (p<0.05). Patients' perception of the need for the medication during symptom free period motivated compliance to treatment, and not merely the knowledge of it. While forgetfulness (35.2%; n=129) and presence of other chronic disease(s) (45.1%; n=165) adversely affected compliance, regular attendance to monthly clinics (78%; n=287), being on Dry Powder Inhalers (55.5%; n=203) and using combined inhalers (78%; n=287) enhanced compliance. Clinic waiting time of less than an hour, instructions on inhaler technique received by demonstration and practicing under the guidance of an expert enhanced compliance significantly (p<0.05).

Conclusion:

Patients' perceptions regarding disease and treatment influence treatment compliance significantly. Provision of clear rationale for treatment, consonant with patients' perception of their illness and addressing concerns related to erroneous beliefs need addressing. Regular assessment of patients' inhaler technique and physical demonstration is recommended.

Declaration of Interest:

none

References & Clinical Trial Registry Information

none

Corresponding Author: Nazneen Nazeer Email: farazfaiz@outlook.com

CR-29. Treatment of Extra-pulmonary Tuberculosis at the Public Health Facility

Taj Muhammad¹, Dr. Maqsood Ali Khan², Dr. Dost Muhammad²
¹TB CONTROL PROG, ²Tuberculosis Control Program

Aim:

To find out the site of Extra-Pulmonary Tuberculosis and the Role of DOTS in the treatment outcome.

Method:

This study was conducted at District TB Control Clinic, District Peshawar having an average daily OPD of 250 – 300 patients with chest and other respiratory symptoms. Patients registered between 1st Jan, 2014 till 30th June, 2014 (six months) were included in the study. TB registration registered (TB 03) was maintained by the DOTS facilitator of the health facility for the patient details with all its information's including patients referred from Teaching Hospitals with different specialties and the other General Practitioners. The data was collected from the register and free treatment was started according to the body weight and WHO guidelines, follow up was carried out during the Treatment course for any side effects of the medicine and also for the progress.

Results:

Extra-Pulmonary TB in order of frequency is shown as under;

Total Registered cases of Extra-Pulmonary Tuberculosis = 655

Male: 320, 48.8%.

Female = 335, 51.2%

	<u>No. of Cases</u>	<u>Percentage</u>
1. Abdominal Tuberculosis	243	37.0%
2. Pleural Effusion	170	25.9%
3. Cervical Lymphadenitis	119	18.1%
4. Carries Spine	42	6.6%
5. Hilar Tuberculosis	41	6.4%
6. Joint, Bone, Discharging Sinuses	25	3.8%
7. Millary Tuberculosis	8	1.2%
8. Tuberculous Meningitis	7	1.0%

Conclusion:

Maximum cases of Extra-Pulmonary TB were Abdominal TB, Pleural Effusion and Cervical Lymphadenitis. They all completed full course of treatment with no significant complications, and declared as completed with female predominance.

Corresponding Author: Taj Muhammad Email: drtaj_2000@hotmail.com

CR-30. Treatment outcomes from community-based drug resistant tuberculosis treatment program

Mohammad Dost Khan
Provincial TB Control Programme Khyber Pakhtunkhwa

Aim:

To assess the treatment outcomes of and predictors of poor outcome of multidrug-resistant tuberculosis (MDR TB) patients treated as outpatient at different Programmatic management of drug resistant TB unit of Khyber Pakhtunkhwa, Pakistan.

Method:

We retrospectively reviewed records of patients who were registered for MDR-TB treatment during 2012 to 2014 at four different Programmatic Management of Drug Resistant TB (PMDT) units of Khyber Pakhtunkhwa province of Pakistan.

Results:

A total of 1423 patients enrolled from January 2012 to Dec 2016. But here we analyzed retrospective record of only those patients who completed their treatment i.e. from January 2012 to December 2014 (817 MDR-TB patients). Among these patients 43 were from Afghanistan and remaining 774 patients were Pakistani. Mean age of the study cases was 31.2 years ranging from 5 to 81 years. Sixty percent of patients (63.4%) at the time of their treatment were married. Baseline weight of maximum number of patients was between 39-58 kg ranging from 15-83 kg with an average of 44 kg. Co-morbidity was found in Eighty-five (36.4%) patients. Most of the study cases (64.4%) were of lower socio economic status.

The treatment success rate was 75.2% and unsuccessful outcome were 24.8%. In univariate analysis, poor outcomes were associated with age > 44 years (OR,0.20; 95% CI, 0.127-0.320, P<0.001), lung cavitations (OR,0.022; 95% CI, 0.017-0.044, P<0.001), previous use of SLD's (OR,2.31; 95% CI, 1.002-3.241, P=0.021),resistance to SLD (OR, 1.351; 95% CI, 1.334-4.122, P=0.001) and resistance to ofloxacin (OR, 2.412; 95% CI, 1.455-3.233, P<0.001). Whereas multivariate logistic regression analysis, showed that poor outcomes were associated with patients with age > 44 years (OR 0.165, 0.055-0.431, P=0.001), baseline lower body weight (OR 3.35, 0.003-0.053, P=0.001) and cavitatory lungs (OR 0.021, 0.041-0.063, P<0.001).

Conclusion:

MDR-TB patient needs special attention for better treatment outcomes. The presence of older age, lower body weight, resistance to ofloxacin, treated with SLD's in past, SLD resistance and cavitary disease are independent prognostic factors for poor outcome in patients with MDR-TB.

Declaration of Interest:

i hereby declare my interest to present poster in the upcoming IPCRG conference to be held in Sri lanka in August 2017. I am responsible for my data to be presented.

References & Clinical Trial Registry Information

Multi-Drug Resistance TB; Treatment Outcomes; Khyber Pakhtunkhwa; Pakistan.

Corresponding Author: Mohammad Dost Khan Email: mohammaddostkhan@gmail.com

CR-31. Trend of cigarette smoking among the academic institution's students

Taj Muhammad¹, Dr. Maqsood Ali Khan², Dr. Dost Muhammad², Dr. Javaid Khalid³, Mehdi Maqsood⁴, MISHA WALI Wali⁵
¹TB Control Prog, ²Tuberculosis Control Program, ³Girls Medical College, Peshawar, ⁴Health Institution, ⁵Khyber Medical University

Aim:

Research need on the various aspect of tobacco use especially among the young adults this study gives summary of a research conducted among the cigarette users with the aim;

1. Prevalence of Cigarettes smoking among the academic institution's students
2. To find influencing factors for the Tobacco use among youngsters
3. To develop a clinical and practical guidelines for Doctors and Health Professionals

Method:

Total number of 154 young adults of age ranging 10 to 25 were selected out of which 101 (65.6%) were male and 53 (34.4%) were female. The number of total smokers were 51 (33.1%), out of which the male and female students were, 40 (39.6%) and 11 (20.7%) respectively. Majority of the Smokers i.e.74.5% smoked less than 10 cigarettes per day while only a small number smoked more than 20 cigarettes per day. More than 93.6% students were aware of Smoking Hazards and even also aware of Passive Smoking Hazards. Still only 74.7% and 69.8% male students would like to favor ban on smoking at public places and on cigarette advertisements respectively, while the corresponding number of female students was 94.1% and 80.4% respectively. 15 male (37.5%) and 6 female (54.5%) of the smoker students, first smoked cigarette during their school life. To find out the overall attitude of the students towards smoking.

Results:

Results: The study showed that a significant number of male and female young students were smokers with female at a lower rate of smokers. The number of the cigarette smoked per day was specified by only 45 students. The gender and the financial status difference plays important role in determining the smoking habits.

Corresponding Author: Taj Muhammad Email: drtaj_2000@hotmail.com

CR-32. Tuberculosis incidence, treatment outcomes and factors associated with mortality among healthcare workers in Malaysia

Su May Liew¹, Ee Ming Khoo¹, Bee Kiau Ho², Yew Kong Lee¹, Mimi Omar², Fazlina Mohamed Yusoff², Asmah Razali², Vickneswari Ayadurai², Muhamad Ismail², Mohamed Naim Abdul Kadir², Karuthan Chinna¹, Jiloris Frederick Dony²
¹University of Malaya, ²Ministry of Health, Malaysia

Aim:

To determine the incidence and treatment outcomes of tuberculosis (TB) amongst healthcare workers (HCWs) registered in 2012 to 2014 with the Malaysian National TB Surveillance Registry, and the factors associated with mortality.

Method:

This was a retrospective cohort study and a sub-analysis of the Malaysian National TB Surveillance Database (MyTB) from 2012 to 2014 focusing on healthcare workers. HCWs were categorised into six groups namely doctors, paramedics, dental, supporting, administrative staff and others. Sociodemographic and clinical data were analysed. Unfavourable outcomes included treatment failure, transferred out and lost to follow-up, treatment defaulters, those not evaluated and all-cause mortality.

Results:

In total, there were 944 HCWs out of the 69 286 cases in the 2012-2014 national TB registry. The incidence rates ranged from 135.18 to 156.50 per 100 000 and were higher for HCWs compared to the general population (RR: 1.70 to 1.96) . The mean age was 34.6 ± 10.55 years, and 68.9% were female. The majority were paramedics (44.3%) followed by supporting staff (26.9%) and doctors (13.8%). About 52.3% were sputum negative with 24.2% having no abnormal lesions on chest radiograph and 50% with minimal findings. There were two cases of MDR-TB. Nearly a quarter (23.8%) had extrapulmonary TB. Only 7.2% (n=68) had unfavourable outcomes; of these, 23 died giving a case fatality rate of 2.4%. Factors associated with death were older age, rural place of dwelling, HIV positivity and not receiving Directly Observed Therapy (DOTS).

Conclusion:

Health care workers had double the risk of contracting TB but lower rates of mortality compared to the general population. Extrapulmonary TB accounted for nearly a quarter of the cases. Older age, HIV positive status, rural setting and not following the DOTS regime was associated with TB mortality.

Declaration of Interest:

The study was funded by the Clinical Research Centre, Ministry of Health, Putrajaya, Malaysia.

Conflicts of interest: none declared.

Corresponding Author: Su May Liew Email: su_mayliew@um.edu.my

CR-33. Understanding and experiences of asthma in children of Indian ethnicity in three Malaysian suburban schools

Norita Hussein¹, Su May Liew¹, Azainorsuzila Mohd Ahad², Julia Suhaimi¹, Siti Nurkamilla Ramdzan¹, Nursyuhada Sukri¹, Ee Ming Khoo¹, Ping Yein Lee³, Ai Theng Cheong³, Hani Syahida Salim³, Nik Sherina Hanafi¹, Hilary Pinnock⁴

¹University of Malaya, ²Ministry of Health, ³University Putra Malaysia, ⁴University of Edinburgh

Aim:

To explore the understanding and experiences of children of Indian ethnicity about their asthma

Method:

This was a qualitative study carried out among children of Indian ethnicity diagnosed with asthma in three suburban primary schools. Five focus group discussions and one in-depth interview were conducted in Tamil by three researchers using a semi-structured interview guide. The guide was developed based on the construct of the Biopsychosocial model and literature review. The interviews were audio-recorded, transcribed verbatim, translated to English and checked for accuracy. A thematic approach was used to analyse the transcripts.

Results:

A total of 25 school children were interviewed without their parents; their ages ranged from seven to 12 years. Three major themes emerged from these interviews. There were misconceptions regarding disease aetiology with some participants attributing their asthma as being caused by cold water, rain or infection. There was poor understanding about the management of asthma; medical treatment was sought only during acute attacks and inhalers were perceived as causing harm. Participants described how follow-up was not emphasised; typically they only saw the doctor during acute attacks. Asthma was viewed to be 'bad'; it caused limitation of activities, disturbed sleep and created stigmatisation from relatives and friends.

Conclusion:

Children of Indian ethnicity with asthma had poor understanding of asthma and its treatment. They experienced negative physical and psychosocial impact because of this. Education targeting understanding of the disease and its treatment as well as demystifying misconceptions needs to be provided to children with asthma and their parents. Follow-up arrangements need to be strengthened to ensure better delivery of preventative asthma care.

Declaration of Interest:

This study was funded by a research grant from the International Primary Care Respiratory Group (IPCRG).

Corresponding Author: Norita Hussein Email: norita@ummc.edu.my

CR-34. Understanding and practices of children with asthma of Malay ethnicity during the fasting month

Nursyuhada Sukri¹, Siti Nurkamilla Ramdhan¹, Hani Syahida Salim², Ee Ming Khoo¹, Julia Shuhaimi¹, Ping Yein Lee², Ai Theng Cheong², Nik Sherina Hanafi¹, Su May Liew¹, Norita Hussein¹, Azainorsuzila Ahad³, Hilary Pinnock⁴
¹*Department of Primary Care Medicine, Faculty of Medicine, University Malaya*, ²*Department of Family Medicine, Universiti Putra Malaysia*, ³*Lukut Health Clinic, Ministry of Health Malaysia*, ⁴*Usher Institute of Population Health Sciences and Informatics, University of Edinburgh*

Aim:

To explore the understanding and practices of children with asthma of Malay ethnicity during the fasting month.

Method:

This was a qualitative study of children with asthma in Malaysia. Five focus group discussions were conducted by two trained researchers using a semi-structured topic guide which was constructed based on the Biopsychosocial model and literature review. The interviews were audio recorded, transcribed verbatim and checked for accuracy. The thematic approach was used to analyse the data. Informed consent was sought from parents or caregivers of the children prior the interviews.

Results:

A total of sixteen children aged between 7 to 12 years old were interviewed in this study. Three themes emerged from the analysis: 1) Most children felt that their asthma control was similar between fasting and non-fasting months, 2) The timing of use of regular inhaler was adjusted to allow for fasting, 3) There were different beliefs regarding the use of relief inhalers during the day of fasting, some participants stated that the use of inhalers would break the fast while others perceived that fasting could continue.

Conclusion:

Children with asthma of Malays ethnicity feel that their fasting will not be affected by medication use as they simply readjusted the time of use. However, some are afraid to use inhalers during the day of fasting month as they believed their fasting would be invalid. Thus, having clear guidelines for management of asthma during the fasting month is crucial to avoid any misunderstanding

References & Clinical Trial Registry Information

This study was conducted with a research grant from the International Primary Care Respiratory Group (IPCRG).

Corresponding Author: Nursyuhada Sukri Email: nursyuhada.sukri1@gmail.com

CR-35. Validation of an expert system for respiratory disease diagnosis in primary care

Ananda Perera¹, Shyamika Peries², Lavindi Peries²

¹St Joseph's Hospital, ²Ministry of Health

Aim: Diagnostic accuracy of respiratory diseases in primary care is very low (1). International Primary Care Respiratory Group e-Delphi exercise recently showed many primary care physicians in low resource settings request simple tools for respiratory diagnosis and assessment (2). Therefore an expert system called Computer Assisted Medical Evaluation of Symptoms – CAMEOS was designed and developed and was validated in a Sri Lankan primary care setting.

Methods: In this study a board certified family physician entered the data into a pro forma. This form had 91 respiratory symptoms required to make a diagnosis of 22 respiratory diseases commonly seen in primary care. The data was then entered into the CAMEOS user interface. User interface with click of the submit button sends the data into the CAMEOS server system. Once the analysis is over and the diagnostic output is generated CAMEOS sends the output back to the user. This output contains the final diagnosis and the most probable differential diagnoses based on calculation of several probability statistics. Finally all the 100 patients were classified based on the agreement or disagreement between the specialist family physician and the CAMEOS. The diagnosis of the family physician was considered the correct diagnosis in the classification of patients. Table 1 shows the distribution of patients.

Results: The Cohen's kappa statistic for the study was 0.64 with a SE 0.40 - 0.84. This is suggestive of good agreement between the board certified physician diagnosis and the CAMEOS diagnosis. Landis and Koch (3) have proposed the following as standards for strength of agreement for the kappa coefficient: ≤ 0 =poor, .01–.20=slight, .21–.40=fair, .41–.60=moderate, .61–.80=substantial, and .81–1=almost perfect.

Conclusion: The preliminary validation study of the CAMEOS suggests good agreement between the CAMEOS and a board certified physician diagnosis of respiratory diseases in primary care.

Disclosures: Presenting author is the designer and developer of the CAMEOS in the study. The gold standard diagnosis was provided by Dr Seneth Samaranayaka Board certified family physician.

Corresponding author: Ananda Perera Email: bedeananda@gmail.com

References:

1. José BPdeSao, CaMargos PAM, da Cruz Filho AAS, Corrêa RDeA. Diagnostic accuracy of respiratory diseases in primary health units. Rev Assoc Med Bras 2014; 60(6):599-612.
2. Pinnock H, Ostrem A, Rodriguez MR, Ryan D, Stallberg B, Thomas M, Tsiligianni I, Williams S, Yusuf O. Prioritising the respiratory research needs of primary care: the International Primary Care Respiratory Group (IPCRG) e-Delphi exercise. Prim Care Respir J 2012; Available from: URL: <http://dx.doi.org/10.4104/pcrj.2012.00006>
3. Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics. 1977 ;33:159–174

Corresponding Author: Ananda Perera Email: bedeananda@gmail.com

[CR35] Table 1: Agreement between family physician (fp) diagnosis (dx) and the cameos system

	FP Dx YES	FP Dx NO	Totals
CAMEOS Dx Yes	66	10	76
CAMEOS Dx No	4	20	24
Totals	70	30	100

CR-36. Cardio-pulmonary fitness parameters of healthy school going male athletes in Colombo district, Sri Lanka

Dr. K.D.C. Upendra Wijayasiri¹, S W Wimalasekera², Ldck Perera³, Admadz Jayathilake⁴, Slmdh Manohari⁵
¹colombo south teaching hospital, ²Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka, ³Sports Medicine unit, Colombo South Teaching Hospital, Kalubowila, Dehiwala, Sri Lanka, ⁴Sri Jayewardenepura General Hospital, Sri jayewardenepura Nugegoda, Colombo, Sri lanka., ⁵National Cancer Institute, Maharagama, Sri Lanka

Aim:

Introduction

In Sri Lanka it is compulsory for every school athlete to obtain a valid fitness certificate from a doctor before they engage in competitive sports. The cardiopulmonary fitness assessment is a main component of fitness certification of an athlete. There is a paucity of Sri Lankan data on normal cardiopulmonary fitness parameters for school level, club level or national level athletes.

Objectives

To determine the cardiopulmonary fitness parameters of Sri Lankan school level boy athletes engaged in different sports.

Method:

Method

Colombo district school boy athletes (n = 60) age between 10 yrs to 16 yrs were studied. Cardio-Pulmonary fitness parameters (peak O₂ uptake (VO_{2peak}), resting heart rate- HR_{rest} , peak heart rate (HR_{peak}), heart rate after 90 seconds and 3 minutes after exercise- HR_{90sec} and HR_{3min} , peripheral oxygen saturation rest – SpO_{2rest} , SpO_{290sec} , SpO_{23min} , resting respiratory rate- RR_{rest} , systolic blood pressure- SBP and diastolic blood pressure- DBP .) were assessed by using the “Queens College Step Test”.

Results:

Results

The mean height $157cm \pm 0.13$ and weight $43.68 kg \pm 11.26$ of the athletes were within the normal growth curves for the above age group. However the BMI of the athletes was 17.3 ± 0.13 . The RR_{rest} was 18.5 ± 2.69 breaths per min. Mean VO_{2max} of the athletes was 38.8 ± 5.04 ml/Kg/min. Mean SBP and DBP were 101.00 ± 17.0 mmHg and 71.2 ± 8.3 mmHg. The mean SpO_{2rest} , peak SpO_2 , SpO_{290sec} , and SpO_{23min} after exercise, were $99.3\% \pm 2.5$, $100 \pm 1.54\%$, $99.47\% \pm 1.66$ and $99.07 \pm 0.8\%$. HR_{rest} was 79.3 ± 10.12 BPM and HR_{peak} was 172.1 ± 12.91 BPM. The $HR_{90seconds}$ and HR_{3min} were 135.42 ± 19.00 BPM and 119.21 ± 16.58 BPM.

Conclusion:

Conclusions

The doctors responsible to issue fitness medical certificates to school level athletes must conduct a cardiopulmonary fitness assessment of the athletes. These preliminary results could be used as normal parameters until a normogram is devised for the Sri Lankan population.

References & Clinical Trial Registry Information

References

1. S Chatterjee, P Chatterjee, P S Mukherjee, A Bandyopadhyay et al, British Journal Sports Medicine 2004; 38:289–291.
2. WD McArdle, FI Katch, VL Katch, Essentials of Exercise Physiology- 5th, 2016, ISBN978-1-4963-0909-9

Corresponding Author: Dr. K.D.C. Upendra Wijayasiri Email: upendra.wija@gmail.com

CR-37. Exhaled Carbon Monoxide and Carboxyhemoglobin levels of Adult Male Tobacco smokers in Sri Lanka: A preliminary results.

HM Prasanna Herath¹, SW Wimalasekera², AATD Amarasekara³

¹General Sir John Kotelawala Defence University, Sri Lanka, ²Department of Nursing and Midwifery, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka, ³Department of Allied Health Sciences, Faculty of Medical Sciences, University of Sri Jaywardenepura, Nugegoda, Sri Lanka

Aim:

Tobacco smoking is one of the major preventable causes of death in the world. Tobacco kills 50% of its users. Level of Tobacco smoking can be measured by carbon monoxide (CO) levels in breath and are known to correlate closely with blood carboxyhaemoglobin concentration. Exhaled CO concentration can be measured using standardized calibrated CO smokerlyser.

To determine the severity of smoking by measurement of the breath Carbon monoxide (BCO) levels of Tobacco smokers.

Method:

Current male tobacco smokers (n=30) aged 21-56 were randomly selected and compared with non-smoking control subjects. Breath Carbon Monoxide (BCO) and Carboxyhemoglobin (COHb %) were measured using a portable Bedfont piCO+Smokerlyzer (Bedfont Scientific, UK, <http://www.bedfont.com>). BCO cutoff of ≥ 7 ppm was used and analysis was performed minimum after 10 minutes of last cigarette as recommended by the manufacturer.

Results:

The mean age of the smokers was 37.1 years (± 10.2 SD) and the mean age of the nonsmokers was 32.3 years (± 8.2 SD). The mean BCO level of the smokers 17.4 ppm (± 11.1 SD) was significantly higher than the mean BCO level of the non-smokers 2.8 ppm (± 0.79 SD) ($p < 0.05$). The mean COHb% level of the smokers was 3.6 ppm (± 1.9 SD) significantly higher than the mean COHb% level of the non-smokers 1.1 ppm (± 0.1 SD) ($p < 0.05$).

Conclusion:

BCO levels and COHb% levels effectively monitor CO levels amongst smokers. The BCO levels correlated significantly with duration and frequency of smoking in this population. Thus these tests can be used effectively to determine the severity of smoking in populations.

References & Clinical Trial Registry Information

Cropsey, K.L., Eldridge, G.D., Weaver, M.F., Villalobos, G.C., Stitzer, M.L., 2006. Expired Carbon Monoxide Levels in Self-Reported Smokers and Nonsmokers in Prison. *Nicotine Tob. Res.* 8, 653–659. doi:10.1080/14622200600789684

Low, E.C.T., Ong, M.C.C., Tan, M., 2004. Breath carbon monoxide as an indication of smoking habit in the military setting. *Singapore Med. J.* 45, 578–582.

WHO | WHO report on the global tobacco epidemic, 2015 [WWW Document], n.d. URL

http://www.who.int/tobacco/global_report/2015/en/ (accessed 12.29.15).

Corresponding Author: HM Prasanna Herath Email: prasannaherath85@gmail.com

CR-38. Types and frequency of Tobacco smoking amongst Adult Male Tobacco Smokers in Sri Lanka, Preliminary results

HM Prasanna Herath¹, SW Wimalasekara², AATD Amarasekara³

¹General Sir John Kotelawala Defence University, Sri Lanka, ²Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka, ³Department of Allied Health Sciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka

Aim:

Worldwide tobacco smoking has become one of the biggest public health issues and it has contributed to 6 million of annual deaths among every community. In Sri Lanka around 21,000 people are dying per year due to tobacco smoking associated diseases. Cigarettes, cigars, beedi or white beedi are the commonest tobacco products used in the community.

To determine the frequency of smoking and the smoking pattern of the selected population.

Method:

Current male tobacco smokers (n=30) aged 21-56 were randomly selected and consent was obtained. Tobacco smoking details were collected by using an interviewer administered questionnaire (including a part of GATSII questionnaire) participants were asked about smoking status, smoking history, and pattern of tobacco use.

Results:

Thirty smokers were studied. Most of the subjects (93.3%) smoked cigarettes. The mean duration of smoking was 14.9 years (\pm 7.9 SD) and the mean daily smoking rate was 6.6 cigarettes per day \pm 5.2 SD. 93.3% (n=28) of smokers are willing to quit smoking although they had not been advised by a medical practitioner.

Conclusion:

The results showed an increased prevalence of smoking amongst the study group. The need for essential strategies to motivate the smoker to stop is required. Primary care physicians can play a major role in motivating smokers to quit smoking.

References & Clinical Trial Registry Information

Ekpu, V.U., Brown, A.K., 2015. The Economic Impact of Smoking and of Reducing Smoking Prevalence: Review of Evidence. *Tob. Use Insights* 8, 1–35. doi:10.4137/TUI.S15628

Warren, C.W., Sinha, D.N., Lee, J., Lea, V., Jones, N.R., 2009. Tobacco Use, Exposure to Secondhand Smoke, and Training on Cessation Counseling Among Nursing Students: Cross-Country Data from the Global Health Professions Student Survey (GHPSS), 2005–2009. *Int. J. Environ. Res. Public Health* 6, 2534–2549. doi:10.3390/ijerph6102534

Ministry of Health and Indigenous Medicine | A Society Free From Drugs – 2014

http://www.health.gov.lk/en/index.php?option=com_content&view=article&id=415:a-society-free-from-drugs-2014&catid=1:latest-news (accessed 12.29.15).

Katulanda, P., Wickramasinge, K., Mahesh, J.G., Rathnapala, A., Constantine, G.R., Sheriff, R., Matthews, D.R., Fernando, S.S.D., 2010. Prevalence and Correlates of Tobacco Smoking in Sri Lanka. *Asia. Pac. J. Public Health*. doi:10.1177/1010539509355599

Corresponding Author: HM Prasanna Herath Email: prasannaherath85@gmail.com