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Respiratory Meeting

&

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Respiratory Health:  
Adding Value in a  
Resource Constrained World

Research Ideas  
**ABSTRACT BOOK**

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## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8526

Research Ideas Posters

### A meta-analysis of smoke-free legislation effects on asthma admissions

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**Aim:** To synthesize the available evidence in scientific papers of smokefree legislations (SFL) effects on asthma admissions among all populations (adults, children or general population).

**Methods:** Systematic review and meta-analysis were carried out. PRISMA guidelines were followed. A search between January 1995 and February 2015 was performed in PubMed, EMBASE, Cochrane Library, Scopus, Web of Science, and Google Scholar databases. The inclusion criteria were: 1) Original scientific studies concerning SFL, 2) With data before and after its implementation and 3) assessment of the impact of SFL on asthma.

A meta-analysis was performed using the Review Manager (RevMan, version 5.3). The effect of SFL was estimated by risk ratios (RR) and risk difference (RD). Pooled effect measures were computed applying the inverse-variance method in a random-effect model. Heterogeneity was quantified with the I<sup>2</sup> statistic. Subgroup and sensitivity analysis were performed.

**Results:** 17 studies reported effects on asthma admissions. All the meta-analysis concerned comprehensive SFL settings. Six studies were included in a meta-analysis for asthma admissions in general population, three focused on children, five focused on adults and four were stratified by age. There was a significant decrease of 13% after SFL in general population (RR 0.87; 95%CI 0.81, 0.93; I<sup>2</sup> 78%) and of 15% both in children (95%CI 0.79, 0.91; I<sup>2</sup> 87%) and adults (95%CI 0.73, 0.99; I<sup>2</sup> 65%). In sensitivity analysis, exclusion of individual studies modified the estimates substantially, in adult population, with pooled RRs of asthma admissions ranging from 0.80 to 0.90. Subgroup analysis by study design and RoB did not significantly reduce heterogeneity in all populations.

**Conclusion:** SFL appears to decrease rates of admissions for asthma in all populations in comprehensive settings.

**Funding statement:** This work was supported by Network for Prevention and Health Promotion in Primary Care (redIAPP, RD12/0005/0001; RD16/0007/0001), co-financed with European Union ERDF funds.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8599

Presented at: 5.5 Oral Abstracts 6: Research Ideas 01/06/2018 11:50-13:00

### **A mixed method programme to develop and evaluate interventions at patient and practice level to improve asthma care: a RESPIRE proposal**

Norita Hussein<sup>1</sup>, Ee Ming Khoo<sup>1</sup>, Hilary Pinnock<sup>2</sup>, Su May Liew<sup>1</sup>, Nik Sherina Hanafi<sup>1</sup>, Ping Yein Lee<sup>3</sup>, Sazlina Shariff Ghazali<sup>3</sup>, Ai Theng Cheong<sup>3</sup>, Yong Kek Pang<sup>1</sup>, Karuthan Chinna<sup>1</sup>

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#### **1. Research questions**

- What is the current burden of disease and quality of asthma care in a cohort of asthma patients in Klang District, Malaysia?
- Will asthma interventions directed at patient and practice improve asthma control?

#### **2. Background**

In Malaysia, asthma is a common but neglected chronic disease. Despite availability of effective treatment, asthma control is unsatisfactory and mortality is increasing. Objective assessment of control is uncommon, inhaled controller medications are under-utilised, inhaler technique is poor, only a minority are reviewed regularly and even fewer are offered supported self-management. We plan mixed methods studies to develop and evaluate pragmatic interventions directed at improving health care practice and developing supported asthma self-management.

#### **3. Methods**

A 3-phase prospective cohort study over 3 years at patient and practice level to develop a complex intervention to improve asthma care in adults and children (>5 years) attending six public primary care clinics in Klang District, Malaysia.

Phase 1 includes baseline data collection of patients and practice (asthma control among adults and children and its associated factors; documentation of peak flow rate; asthma control test; follow-ups and equipment availability in practice).

Phase 2 includes qualitative exploration of patient and professionals perspectives on asthma care and supported self-management, discourse analysis of recorded consultations and a trial of supported self-management using a pictorial asthma action plan.

Phase 3 is the development and evaluation of tailored interventions to implement asthma self-management by targeting patients and health care practice.

#### **4. Questions to discuss**

1. How do we recruit 'hidden patients' who are not currently accessing public primary care clinics?
2. How do we engage the busy doctors and other stakeholders from the outset?

#### **Declaration of Interest**

This is a RESPIRE project proposal

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8498

Presented at: 8.5 Oral Abstracts 9: Use of Data 02/06/2018 09:00-10:20

### **A NOVEL observational longitudinal study in patients with asthma and/or COPD: NOVELTY protocol and rationale**

Helen K Reddel<sup>1</sup>, Alvar Agustí<sup>2</sup>, Gary P Anderson<sup>3</sup>, Aruna T Bansal<sup>4</sup>, Richard Beasley<sup>5</sup>, Elisabeth Bel<sup>6</sup>, Christer Janson<sup>7</sup>, Barry Make<sup>8</sup>, Ian Pavord<sup>9</sup>, David Price<sup>10</sup>, Lance Brannman<sup>11</sup>, Donna K Finch<sup>12</sup>, Asparuh Gardev<sup>13</sup>, Niklas Karlsson<sup>14</sup>, Christina Keen<sup>14</sup>, Javier Nuevo<sup>15</sup>, Stephen Rennard<sup>16</sup>, Maria Gerhardsson de Verdier<sup>13</sup>

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### Research Ideas on Respiratory Conditions and Tobacco Dependency Abstract

**Research question:** What are the patient characteristics, treatment patterns and disease burden across the spectrum of obstructive lung disease over time? What phenotypes (observable characteristics) and endotypes (distinct molecularly defined functional or pathobiological mechanisms) are associated with differential outcomes for symptom burden, clinical evolution and healthcare utilisation (HCU)?

**Background:** Asthma and COPD have traditionally been viewed as distinct diseases. While their features overlap and they can share pathobiological mechanisms, clinical and mechanistic studies are frequently limited to patients with only asthma or COPD, and many study populations are defined by strict enrolment criteria leading to limited generalisability. There are limited prospective, observational studies that cross asthma, COPD and asthma-COPD overlap.

**Possible methodology:** NOVELTY (a NOVEL observational longitudinal study in patients with asthma and/or COPD) is a 19-country, prospective, observational, longitudinal cohort study that aims to include up to 12,000 patients of  $\geq 12$  years of age with a diagnosis or suspected diagnosis of asthma and/or COPD across the spectrum of severities (balanced between diagnoses), from primary care and specialist clinical practices. The study is collecting data on clinical assessments, spirometry, biospecimens (blood/urine), patient-reported outcomes (PROs) and HCU at baseline and at annual visits for 3 years, with PROs collected every 3 months via internet or telephone.

**Questions to discuss:** What insights will NOVELTY provide into the diagnosis, assessment and management of patients with obstructive lung disease in primary and specialist care around the world? For example, how will physician-assessed diagnosis and severity at baseline relate to patient experiences and clinical outcomes during the 3-year follow-up? How can the NOVELTY database and biobank be best used to improve our understanding of obstructive lung disease, and to facilitate the development of new treatments and a personalised approach to managing obstructive lung disease?

#### **Declaration of Interest**

NOVELTY is funded by AstraZeneca; clinicaltrials.gov NCT02760329.

#### **References and Clinical Trial Registry Information**

NCT02760329

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8607

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### A systematic review of clinical prediction models to support the diagnosis of asthma in primary care

Luke Daines<sup>1</sup>, Audrey Buelo<sup>2</sup>, Susannah McLean<sup>1</sup>, Steff Lewis<sup>3</sup>, Aziz Sheikh<sup>1</sup>, Hilary Pinnock<sup>1</sup>

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**Research Question:** Which clinical prediction models (CPM) to support the diagnosis of asthma in primary care are currently available, how were they derived and what is the quality and clinical value of each?

**Background:** There are growing concerns that misdiagnosis of asthma is common and substantial. As asthma is mostly diagnosed in non-specialist settings, a CPM to aid the diagnosis of asthma in primary care may help improve diagnostic accuracy.

We aimed to identify, describe and synthesise existing CPMs designed to support the diagnosis of asthma in children and adults presenting with suggestive symptoms in primary care settings.

**Methodology:** Systematic review. We searched Medline, Embase and CINAHL (1990-2017). We will include CPMs designed for use in primary care (or equivalent settings) to aid diagnostic decision-making of a healthcare professional during the assessment of an individual with symptoms suggesting asthma. A quantifiable probability of asthma diagnosis is the primary outcome. Derivation and validation studies with or without external validation will be included. Two reviewers will independently screen titles/abstracts and full texts for eligibility and extract data from included papers. The CHARMS checklist and/or PROBAST will be used to assess risk of bias within each study. Results will be summarised narratively.

**Questions to discuss:** Database searching identified 12,774 citations. After title/abstract screening, the full text of 52 citations are being assessed for eligibility. With increasingly large numbers of citations identified in systematic review searches, can machine learning be reliably used to aid title and abstract screening?

The results of this review will inform the development of a CPM for the diagnosis of asthma in primary care. Ultimately, how can the CPM be presented such that it is adopted and utilised by primary care clinicians? The development stages will be done using UK databases: how can we ensure it has global relevance?

#### Declaration of Interest

This project is part of LD's PhD fellowship funded by the Chief Scientist Office, Scotland (CAF/17/01)

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8571

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### **Acute Lower Respiratory Illness Treatment Evaluation (ALRITE): A mobile health application for the management of respiratory illness in children under 5 years**

Laura Ellington<sup>1</sup>, Thomas Nissen<sup>2</sup>, Jesper Kjaergaard<sup>3</sup>, Dennis Burges<sup>4</sup>, Louise Warren<sup>4</sup>, Maneesh Batra<sup>5</sup>, Margaret Rosenfeld<sup>5</sup>, James Stout<sup>4</sup>

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#### **Research question**

Will a mobile health application based on the World Health Organization (WHO) case management algorithm improve outcomes in children ages 2 months to 5 years with acute lower respiratory illness (ALRI) in low resource settings?

#### **Background**

ALRI remains a leading cause of mortality in children aged under 5 years, causing ~103/100,000 deaths worldwide.<sup>1</sup> WHO developed a case management algorithm for children with ALRI, relying on assessment of cough, tachypnea, and respiratory distress to triage and guide treatment with antibiotics. Bronchodilators were added to the algorithm in 2014 with recognition of wheezing as an important complication.<sup>2</sup> Data support high prevalence of wheezing in young children who meet criteria for WHO pneumonia.<sup>3</sup> We propose development of a mobile health application to aid implementation of WHO ALRI case management guidelines.

#### **Possible Methodology**

Mobile application development will focus on incorporating WHO case management guidelines in a user-friendly format. Assessment tools will include a timer for counting respiratory rate, easy-to-follow decision tree, and algorithm for bronchodilator trial. The educational toolkit will include videos teaching respiratory evaluation, bronchodilator administration, and assessment of bronchodilator responsiveness. Patient-specific data will be entered and may serve as the electronic health record. Initial feasibility testing will occur in a controlled environment with skilled healthcare workers. Our ultimate objective is to improve adherence of WHO guidelines among workers of various skill levels in low resource settings and improve outcomes of young children with ALRI.

#### **Questions to discuss**

- What are best measures with which to assess bronchodilator responsiveness?
- How will bronchodilators be reliably supplied and administered in low resource settings?
- What are risks and benefits of including oral corticosteroids in the WHO algorithm?
- What are important outcome measurements for ultimate clinical trial?
- How can we best adapt this application to different healthcare settings?

#### **References and Clinical Trial Registry Information**

1 [www.healthdata.org](http://www.healthdata.org)

2 [http://www.who.int/maternal\\_child\\_adolescent/documents/IMCI\\_chartbooklet/en/](http://www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/)

3 <https://doi.org/10.1371/journal.pone.0081562>

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8623

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### **An Exhaled-Breath Carbon Monoxide Self-Monitoring Device linked to Social Media & Embedded in a Smoking Cessation Program: A Proof of Value RCT**

Ngiap Chuan Tan  
*SingHealth Polyclinics*

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#### Research question

Will using an exhaled breath carbon monoxide self-monitoring device embedded in a smoking cessation program which allows smokers to engage support from social media increase their smoking quit rate?

#### Background

A recent systematic review alludes to the effectiveness of social media in facilitating smoking cessation. However, most interventions center on the mobile applications in engaging the smokers. A novel portable exhaled-breath carbon-monoxide (eCO) self-monitoring device ("STEADES") linked to a specially-designed mobile phone application has been developed, which relays eCO-related data from the smokers to their selected quit supporters via social media. A small feasibility study (accepted for publication in a medical journal) has shown that the measurement accuracy using STEADES was comparable to a commercial smokerlyzer (Pearson Correlation=0.882,  $p<0.01$ ). 85.7% of study subjects perceived the STEADES data would allow them to track progress of their quit attempts, and 92.3% perceived recipients of these data would support their smoking cessation. They reported willingness to use the STEADES device, validating the proof of concept for this prototype.

Possible methodology: (eg research methods, design, population, recruitment, funding):

The next step is to demonstrate proof of value of STEADES. If it is incorporated in a telehealth-based smoking cessation program, in which smokers can leverage on their eCO readings to interact with the healthcare professionals and other on-line anti-smoking advocates to gain advice and support during their quit attempt journey, without taxing on the healthcare system via clinic visits, will it increase their quit rate compared to conventional smoking cessation program?

The target subjects are smokers contemplating smoking cessation, who are current users of smart-phones and active in social media. The proposed study is a multi-site randomized controlled trial (RCT), in which the intervention arm involves the use of STEADES and those without in the control arm. The STEADES team intends to apply for funding to enhance the functionalities of the device, produce adequate number of devices for the RCT and training of facilitators in the web-based support system.

#### Questions to discuss

The STEADES team plans to forge research collaboration with international primary care professionals who are interested in the RCT and to seek feedbacks on the study design.

#### **Declaration of Interest**

The development of the STEADES prototype is funded by the Singapore Tote Board and the feasibility study was supported by seed fund from SingHealth Polyclinics.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8652

Research Ideas Posters 31/05/2018 09:00-10:00

### Assessment of ASHA's workload and its determinants.

Anand Kawade

*King Edward Memorial Hospital Research Centre, Pune, Maharashtra , India , pin-411011*

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**Title:** Assessment of ASHA's (Accredited Social Health Activist) workload and its determinants

**Research question:** What is the scope for entrusting ASHAs with additional responsibilities (specially primary respiratory care) based on ASHAs self-perceived level of occupancy and feasibility.

**Background:** The Accredited Social Health Activist (ASHA) program is the India's largest public-sector community health worker initiative launched as key strategy in NRHM (National Rural Health Mission) by GOI (Government Of India) in 2005. With the successful contribution of ASHA in family planning, immunization and ANC care; health care providers, promoters and policy makers will be thinking of involving ASHA for providing an increasing range of health related activities and interventions. The assessment of workload should respect that many ASHAs are volunteers and not salaried staff, are lay workers without formal training and are facilitator between the community and the healthcare system. Thus, it is imperative to assess the exact workload and its determinants before any additional responsibilities like primary respiratory care would be given to them in order to ensure successful implementation and sustainability of any program. This study will help to understand how much more work could be entrusted to ASHA, given that ASHA is the focal point for most/all ongoing national health programs.

#### Possible methodology:

#### Methods:

This cross-sectional exploratory study will use a mixed-methods approach, both qualitative and quantitative techniques. It will employ 1) a questionnaire survey among Accredited Social Health Activist (ASHA), Auxiliary Nurse Midwives (ANM,) and Medical officer (MO) for an objective assessment of workload and 2) focus group discussions among the ASHA, ANMs to explore workload determinants and perceptions, experiences and attitudes towards workload.

#### STUDY DESIGN AND POPULATION

Study will be conducted in two primary health centers (PHCs) Pune district one rural and one tribal PHC. Randomly selected ASHAs would take part in structure enquiries whereas purposive or convenience sampling will be applied for the selection of ANMs, health system representatives(MO) and community members for taking part in qualitative enquiries. ASHAs, ANMs and MO would be involved only after their consent for participation.

#### Questions to discuss:

- What is ASHA's self-perceived extent of occupancy
- What is health system representative's perspective
- What are the community experiences about ASHA activities.
- What are ASHA's perspective on taking RESPIRE activities (primary respiratory care)

#### Declaration of Interest

This study is a part of "RESPIRE" project and NIHR Global Health Research Unit on Respiratory health is funding source supported by University Of Edinburgh.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8561

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### Assessment of Burden of Chronic Conditions Tool; development and validation in patients with low health literacy

Annerika Slok<sup>1</sup>, Onno van Schayck<sup>1</sup>, Niels Chavannes<sup>2</sup>, Janwillem Kocks<sup>3</sup>, Jean Muris<sup>1</sup>, Jiska Snoeck-Stroband<sup>2</sup>  
<sup>1</sup>Maastricht University, <sup>2</sup>Leiden University Medical Center, <sup>3</sup>University of Groningen

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#### Research question

1. Is it possible to develop an Assessment of Burden of Chronic Conditions (ABCC)-tool?
2. Is it necessary to adjust the ABCC-tool for patients with low health literacy?

#### Background

Recently, the Assessment of Burden of COPD (ABC)-tool, has been developed and evaluated. It measures and visualizes the personal experienced burden of COPD by means of a balloon scheme in the light of the integral health status of patients (see Figure 1). The tool facilitates the communication between general practitioners (GPs) and patients and supports shared decision making and self-management. In primary care healthcare providers see patients with a large variety of chronic diseases. We are therefore exploring the possibilities to expand or adjust the ABC-tool into an ABCC-tool, next to COPD including asthma and diabetes mellitus type 2 (DM2). Moreover, since a substantial part of the population face problems with accessing, understanding, appraising and applying information about health, making it a challenge to provide healthcare to these patients, we have to investigate the usability of this tool for patients with low health-literacy.

#### Possible methodology: (eg research methods, design, population, recruitment, funding)

Firstly, the ABCC-tool needs to be developed by determining parameters that cover the generic burden of chronic diseases, and the burden of asthma and DM2. A literature review and expert opinions will form the basis of this process. Then it should be investigated by means of in-depth interviews whether the domains of the ABCC-tool are in accordance with the burden of disease as experienced by patients and as seen by healthcare professionals. Secondly, the comprehensibility of the ABCC-tool has to be assessed, by means of cognitive interviews with patients with low health literacy to identify difficulties completing the questionnaire and understanding the results. On the basis of the results of these interviews, the tool can be adapted.

#### Questions to discuss

- Which parameters of experienced burden of disease are relevant for more than one chronic condition?
- Which domains define experienced burden of asthma?
- How should we assess these domains?
- Is a questionnaire an appropriate medium to assess burden of disease by patients with low health literacy?

#### Declaration of Interest

No conflicts of interest

#### References and Clinical Trial Registry Information

Slok AHM, et al. *Effectiveness of the Assessment of Burden of COPD (ABC) tool on health-related quality of life in patients with COPD: a cluster randomised controlled trial in primary and hospital care*. *BMJ Open*. 2016;6(7):e011519. doi: 10.1136/bmjopen-2016-011519.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8580

Research Ideas Posters 31/05/2018 09:00-10:00

### Developing and piloting an ICT-based intervention for adult asthma with limited health literacy to improve asthma self-management: A RESPIRE PhD project

Hani Salim<sup>1</sup>, Hilary Pinnock<sup>2</sup>, Ingrid Young<sup>2</sup>, Ping Yein Lee<sup>3</sup>, Sazlina Shariff Ghazali<sup>3</sup>  
<sup>1</sup>Usher Institute, University of Edinburgh, <sup>2</sup>University of Edinburgh, <sup>3</sup>Universiti Putra Malaysia

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**Research question:** What is the potential of an information and communication technology (ICT)-based intervention to improve asthma self-management among people with limited health literacy in a multicultural Asian population?

**Background:** More than 90% of Malaysians have marginal/limited health literacy which is more predominant among Malay ethnicity.<sup>1</sup> Low health literacy is associated with erroneous health beliefs, poor inhaler techniques, poor adherence to self-management activities and poor clinical outcomes,<sup>2 3</sup> supporting the need for interventions to target self-management interventions to adults with limited health literacy. Self-management improves asthma control, reduce exacerbations and improves quality of life.<sup>4</sup> One approach is to utilise an (ICT)-based intervention.

**Possible methodology:** My PhD will use mixed methodologies in three phases:

Phase 1: Systematic review. Using Cochrane methodology, I will synthesis the clinical trial evidence for ICT-based interventions for asthma patients with limited literacy to identify features associated with adoption/usage and clinical effectiveness of interventions

Phase 2: Qualitative study: Focus groups/interviews with adults with asthma and limited health literacy to explore understanding of asthma, its treatments, and current self-management practices. Examples of ICT-based interventions will be used to stimulate ideas.

Phase 3: Development of prototype ICT-based intervention. Ten adult asthma patients of different age/ethnic groups with limited health literacy will be shown the ICT-based intervention and asked to feedback their perceptions using a 'thinking aloud' interview.

#### Questions to discuss:

- 1) Are there any suggestions about ICT-based self-management interventions that may be effective in this group?
- 2) We have three cultures/languages in Malaysia: Should I focus on one – or include all three?

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**Declaration of Interest:** None

**Funding:** NIHR Global Health Research Unit on Respiratory Health RESPIRE

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8655

Presented at: 5.6 Digital Poster Discussion 3: 01/06/2018 11:50-13:00

### **Effect of Biomass Fuel Smoke to Respiratory Health among Women: A Preliminary Study in a Suburban Community in Sri Lanka**

Gihani Jayaweera<sup>1</sup>, Savithri Wimalasekara<sup>2</sup>, Sampatha Goonawardene<sup>2</sup>

<sup>1</sup>Faculty of Graduate Studies, <sup>2</sup>Faculty of Medical Science, University of Sri Jayewardenepura

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Research question: Biomass, as a cooking fuel is in commonplace in 66% households in Sri Lanka in 2016. Sri Lankan women as the primary cooks in the households are at a risk of exposing to biomass fuel smoke. Yet very little is known about the effect of biomass fuel smoke on their respiratory health.

Background: Thus, a preliminary survey was carried out in five suburban Grama Niladari Divisions in Colombo District, Sri Lanka to assess the respiratory symptoms and illnesses and cooking fuel use among biomass fuel users. Lifelong nonsmoking women over 18 years of age who are the primary cooks of the household (N=165) completed an interviewer administered questionnaire on cooking fuel use, respiratory symptoms and illnesses. Dyspnoea in daily living was evaluated using Modified Medical Research Council Scale (mMRC). The mean age of the women was 42 years SD  $\pm$ 13. There were 74.5% Sinhalese (N=123) and 25.5% of Tamil (N=42) participants. Majority were nonemployees (N=129, 78%). Fifty eight percent had secondary education (age 12 -16 years), 25% had primary education (age 6-11 years) and five had never gone to schools. Seventeen of them (10%) were exposed to second hand tobacco smoke. Other occupational exposure to dust or smoke was present only in two households. All most all households were located away from the vicinity of the main road. Majority (N=156, 94%) had indoor exposure to biomass fuel smoke with 6 hours SD $\pm$ 0.2 per day while the others (N=9) had outdoor exposure with 6 hours SD $\pm$ 1.3 hours per day. Seventy four percent had a mMRC score of Grade 0, 21% of Grade 1 and two of Grade 3. Only eight participants reported with chronic cough, five with phlegm and twelve with wheeze. Only one had medically diagnosed respiratory disease which is asthma.

Possible methodology: In conclusion, although there were few reported cases of respiratory symptoms and illnesses among this population, it is worth investigating their respiratory health using novel techniques such as spirometry and exhaled breath analysis and exposure levels using particulate matter analysis in a community based cross sectional study.

Questions to discuss: Then, the parameters can be compared among biomass fuel and clean fuel users to derive further conclusions.

**Declaration of Interest: The survey was funded by the University Research Grant (ASP/01/RE/MED/2017/35) of the University of Sri Jayewardenepura, Sri Lanka.**

#### **References and Clinical Trial Registry Information**

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## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8711

Research Ideas Posters 31/05/2018 09:00-10:00

### Effectiveness of a Smoking Cessation Counselling Program of a Portuguese District

Mariana Ferreira<sup>1</sup>, Gustavo Oliveira<sup>1</sup>, Paulo Lima Pereira<sup>1</sup>, Ana Coelho<sup>2</sup>, Ana Menezes<sup>1</sup>, Maria Sampaio<sup>1</sup>  
<sup>1</sup>USF Garcia de Orta - ACeS Porto Ocidental - Portugal, <sup>2</sup>USF Prelada - ACeS Porto Ocidental - Portugal

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#### Research Question

To characterize smokers who used a Portuguese district's smoking cessation counselling program, to assess tobacco abstinence, thus trying to improve the program's effectiveness for the smoking population.

#### Background

According to WHO, tobacco pandemic was responsible for the death of 100 million people in the 20<sup>th</sup> century and is the first cause of avoidable-mortality in developed countries. Studies show that 80% of smokers want to stop smoking, 35% try to stop every year, but only 5% actually stop consumption without help. Smoking cessation counselling programs have shown to be an effective method to help achieve higher and longer cessation effectiveness.

#### Methodology

To conduct an observational, analytical and transversal study characterizing all smokers that applied to a Portuguese district's smoking cessation counselling program from 01/01/2015-31/08/2017, correlating gender, age, smoking history, onset of smoking, pack-years, cessation attempts, addiction degree, motivation for cessation and smoking cessation success.

#### Questions to Discuss

Despite the amount of studies exposing and characterizing the rising number of smoking cessation programs and their relative attendance, information about their real efficacy is scarce. The way forward for better smoking cessation programs and lesser tobacco addiction must rely on consistent data portraying their success, which this pilot experiment expects to present and improve on.

#### Declaration of Interest

The authors declare no conflict of interest and the study was conducted without resorting to any form of funding.

#### References and Clinical Trial Registry Information

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## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8597

Presented at: 5.5 Oral Abstracts 6 Research Ideas 01/06/2018 11:50-13:00

### Effectiveness of an adapted pulmonary rehabilitation intervention to improve health-related life quality of symptomatic COPD patients in Georgia: RCT protocol

Mariam Maglakelidze<sup>1</sup>, Kate Jolly<sup>2</sup>, Tamaz Maglakelidze<sup>1</sup>, Nino Maglakelidze<sup>3</sup>, Ivane Chkhaidze<sup>1</sup>, Andy Dickens<sup>2</sup>, Rachel Jordan<sup>2</sup>, Kiran Rai<sup>2</sup>, Alice Sitch<sup>2</sup>, Alice Turner<sup>4</sup>, Peymane Adab<sup>2</sup>, On behalf of the Breathe Well Group Breathe Well<sup>5</sup>

<sup>1</sup>Georgian Respiratory Association, <sup>2</sup>Institute of Applied Health Research, University of Birmingham, Birmingham, UK, <sup>3</sup>National Center for Disease Control and Public Health of Georgia; Georgian Respiratory Association, <sup>4</sup>Institute of Inflammation and Ageing, University of Birmingham, UK, <sup>5</sup>Breathe Well

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**Authorship:** Maglakelidze, M<sup>1</sup>; Jolly, K<sup>2</sup>; Maglakelidze, T<sup>1</sup>; Maglakelidze, N<sup>1,3</sup>; Chkhaidze, I<sup>1</sup>; Dickens, A<sup>2</sup>; Jordan, R<sup>2</sup>; Rai, K<sup>2</sup>; Sitch, A<sup>2</sup>; Turner, A<sup>4</sup>; Adab, P<sup>2</sup> on behalf of the Breathe Well Group.

**Affiliations:**<sup>1</sup> Georgian Respiratory Association, Georgia <sup>2</sup> Institute of Applied Health Research, University of Birmingham, Birmingham, UK, <sup>3</sup> National Centre for Disease Control and Public Health, Georgia <sup>4</sup> Institute of Inflammation and Ageing, University of Birmingham, UK

**Title:** Effectiveness of an adapted pulmonary rehabilitation intervention for improving health-related quality of life amongst symptomatic COPD patients in Georgia: a randomised controlled trial (protocol)

**Research Question:** Is a culturally-adapted pulmonary rehabilitation programme effective in improving health-related quality of life for symptomatic COPD patients in Georgia, compared with usual care?

**Background:** The burden of chronic respiratory diseases in Georgia is increasing, with age standardized mortality indicators changing from 7th to 3rd place between 1990 and 2013. Pulmonary rehabilitation (PR) has been shown to have physiological and psychosocial benefits for COPD patients, though it is not currently available in Georgia. PR may provide an effective non-pharmacological treatment option for COPD patients in a country where medication is primarily chargeable.

#### Possible methodology:

Design: Feasibility randomised controlled trial, leading to definitive trial.

Population: Symptomatic patients with spirometrically-confirmed COPD and MRC dyspnoea score  $\geq 2$ .

Recruitment: Patients will be invited by their respiratory physician or via primary care. The feasibility study will recruit a total of 60 patients, with a further 140 patients recruited if a definitive trial is justified.

Intervention: Cultural adaptation of PR, working with key stakeholders. Participants will be randomly allocated to two groups; i) adapted PR, delivered in twice weekly sessions for 8 weeks, ii) usual care control group, receiving 2-3hrs educational and exercise session after 6 months.

Outcome measures: Feasibility outcomes will include intervention fidelity and recruitment rate, which will also form stop/go criteria in addition to intervention acceptability, completion rates and follow-up rates at 8 weeks and 6 months. The primary outcome for the definitive trial is health-related quality of life at 8 weeks. Secondary outcomes include exercise capacity, smoking status and health care usage. Outcomes will be assessed at baseline, 8 weeks and 6 months.

#### Questions to discuss:

How can PR be adapted to best suit the Georgian context?

How best to monitor fidelity of the intervention?

**Declaration of Interest:** The authors declare no conflicts of interest. The research is funded by NIHR Global Health Research, as part of the Breathe Well programme.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8577

Research Ideas Posters 31/05/2018 09:00-10:00

### Effectiveness of different interventions in the education of COPD patients about inhalers technique

Sara Laureano Alves<sup>1</sup>, Benvinda Barbosa<sup>2</sup>, Bernardo Pereira<sup>3</sup>, Elsa Rodrigues<sup>4</sup>, Filipa Meneses<sup>4</sup>, Isabel Peixoto<sup>3</sup>, Laura Igreja<sup>4</sup>, Marta Neves<sup>2</sup>, Méline Lopes<sup>4</sup>, Teresa Tomaz<sup>2</sup>, Pedro Fonte<sup>5</sup>

<sup>1</sup>USF Ruães / GRESP, <sup>2</sup>USF do Minho, <sup>3</sup>USF Ruães, <sup>4</sup>USF Maxisaúde, <sup>5</sup>USF do Minho / GRESP

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#### Research question

To find out which intervention is the most effective in the education of inhalers technique in COPD patients.

**Background:** Inhaled therapy is the most effective treatment for COPD. The authors' experience with COPD patients, as well as the literature, suggest that could exist some barriers related to the process of educating these patients on the use of inhalers. With this work, the authors aim to: analyze the most frequent errors in the inhaler technique of COPD patients, registered in three Family Health Units; measure the effectiveness of different modalities of teaching the inhaler technique; identify the teaching method associated with the best performance; evaluate whether these methods remain effective over the long term.

#### Methodology:

##### Population

COPD patients with 40 years and over.

Sample characterization: Four groups of 32 COPD patients each, according to the following distribution:

- Control group: will receive no intervention;
- Group 1: will get a video presentation showing the inhaler technique;
- Group 2: will receive an informative leaflet explaining the inhaler technique;
- Group 3: the method "teach to go" will be applied - the investigator will teach the inhaler technique, reproducing it using a placebo inhaler device.

##### Methods

The investigator A will evaluate the executed inhaler technique and quantify the errors, in the first meeting with the participants. Patients will then be randomly allocated to the groups, and the correspondent educational intervention will be applied. To insure the method blinding, a second investigator (investigator B) will repeat the evaluation procedure and error quantification, while ignoring the participant group. The evaluation process and error identification will be repeated by the investigators at 1, 3 and 6 months.

#### Questions to discuss

Is the estimated amount of participants enough to reach powerful conclusions?

How can the patients' education level influence the choice of the teaching method?

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8622

Presented at: 5.5 Oral Abstracts 6 Research Ideas 01/06/2018 11:50-13:00

### Effectiveness of different models of smoking cessation advice for improving quit rates in Macedonia: a randomized controlled trial (protocol)

Radmila Ristovska<sup>1</sup>, Amanda Farley<sup>2</sup>, Katarina Stavrikj<sup>3</sup>, Dragan Gjorgjievski<sup>3</sup>, Emilija Krstevska<sup>3</sup>, Aleksandra Stamenova<sup>3</sup>, Gjorgji Stanoevski<sup>3</sup>, Dickens Andy<sup>2</sup>, Rachel Jordan<sup>2</sup>, Peymane Adab<sup>2</sup>, On behalf of the Breathe Well Group Breathe Well<sup>4</sup>

<sup>1</sup>PZU "dr Radmila Ristovska", <sup>2</sup>Institute of Applied Health Research, University of Birmingham, Birmingham, UK, <sup>3</sup>Centre for Family Medicine, Medical Faculty, Skopje, Macedonia, <sup>4</sup>Breathe Well

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**Research question:** Does additional assessment and feedback of lung age or exhaled CO levels among smokers in primary care increase their likelihood of quitting smoking compared to giving very brief smoking cessation advice (VBA) alone?

**Background:** Smoking cessation is important for disease prevention and primary care physicians play a key role. In low resource settings where pharmacotherapy is unavailable and NRT is expensive, alternative smoking cessation interventions are needed. Presenting smokers with personalized evidence of the harmful effects of smoking might encourage cessation; potential interventions include feedback on lung age and exhaled carbon monoxide (CO).

#### Possible methodology:

Design: Individually randomized controlled trial with process evaluation and cost effectiveness analysis.

Population: Current smokers ( $\geq 10$  cigarettes per day), aged  $\geq 35$  years.

Recruitment: Patients will be recruited from 30 GP offices in Macedonia. 885 smokers who are attending for any reason and fit the eligibility criteria, regardless of their motivation to quit smoking, will be invited to take part.

Intervention: Patients will be randomly allocated to 3 groups; i) VBA + lung age, ii) VBA + exhaled CO, iii) VBA alone (control). Patients in each group will be assessed at baseline, 1 and 6 months.

Outcome measures: Primary outcome is smoking cessation at 1 month, confirmed by exhaled  $\text{CO} \leq 10$ ppm. Secondary outcomes include quit attempts at 1 month, smoking cessation at 6 months, reduction in number of cigarettes smoked per day at 1 month and 6 months, motivation to quit at 1 month and 6 months and, quality of life at 1 month and 6 months.

**Questions to discuss:** How best to monitor fidelity of the intervention delivery?

Is there a risk of contamination between intervention arms and how could this be assessed and addressed?

#### Declaration of Interest:

The authors declare no conflicts of interest. The research is funded by NIHR Global Health Research, as part of the Breathe Well programme.

#### References and Clinical Trial Registry Information

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## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8714

Research Ideas Posters 31/05/2018 09:00-10:00

### Effectiveness of lung age as feedback in quitting smoking

Leovigildo Ginel Mendoza<sup>1</sup>, Antonio Hidalgo-Requena<sup>2</sup>, Jose Tomás Gómez-Sainz<sup>3</sup>, José Ignacio Prieto-Romo<sup>4</sup>, Miguel Domínguez Santaella<sup>2</sup>

<sup>1</sup>Centro de Salud Ciudad Jardín, <sup>2</sup>Servicio Andaluz de Salud, <sup>3</sup>Servicio Riojano de Salud, <sup>4</sup>Servicio Extremeño de Salud

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#### Aim:

Assess the effectiveness of inform smokers of their lung age spirometry, as a tool to help you quit smoking

#### Method:

Controlled clinical trial, multicenter and randomized cluster (medical researcher), primary care of Spain. It will include 480 smokers over 18 years, randomized cluster in intervention and control group, that is provide anti-tobacco intervention and feedback with the results of COPD6 Vitalograf, reporting on Lung age to the intervention and as a percentage of controls, with quarterly follow-up for 2 years. Conduct analysis by intention to treat, with comparison starts ial of groups and estimate of the effect on the variable response without adjustment by other variables (Chi-square, Student T), and t test to compare average «deficit lung age» between quitters and those who not stop smoking, all with error alpha 0.05 and 95% confidence intervals. The study will be carried out in accordance with the principles of the Helsinki Declaration, stating the firm informed consent and approval for Research Ethics Committee.

#### Limitations:

Hawthorne effect, training and motivation researchers (cluster randomization).

#### Results:

They will present in the form of baseline characteristics, tracking rate of smoking cessation validated measuring exhaled carbon monoxide. Other results will be change in the stage of the process of quitting, newly diagnosed COPD.

#### Conclusion:

If the results are significant, we will have a useful tool in the process of quitting smoking in primary care

#### Declaration of Interest:

The authors declare no present conflict of interest

### **Electronic Cigarette: the e-vaping trojan horse of harm reducing strategy? What do our patients know about the e-cigarets?**

João Alves<sup>1</sup>, Carlota Veiga de Macedo<sup>2</sup>, Hugo Martins Pissarra<sup>1</sup>, Maria Teresa Costa<sup>1</sup>

<sup>1</sup>UCSP Lapa, ACES Lisboa Central, ARSLVT, <sup>2</sup>Hospital Dona Estefânia - CHLC

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#### **1. What do our patients know about e-cigarettes?**

2. There are no definitive conclusions about e-cigarettes safety, but there is a growing number of evidence stating they cause health damage. If we compare a simple vaping product to conventional smoking, some of the e-cigarettes are less harmful. Nevertheless, the majority of the consumers of e-cigarettes continue to smoke, and there isn't almost any evidence about the effects of the double use of e-cigarettes and conventional smoking. The negative effects of vaping are expected to be related to the pulmonary system, but adverse effects in other systems or a carcinogenic effect cannot be ruled out either. For ex-smokers and those who never have smoked before, the use of e-cigarettes will increase the risk of harm to their health, being highly addictive and without evidence about the prolonged use of nicotine.

3. Methodology: Elaboration of a questionnaire with 10 multiple choice questions about what is currently known about electronic cigarettes. Give a short training session to Family Doctors from Central Lisbon primary care health center group (ACES Lisboa Central) and to the Pediatricians of the Hospital Dona Estefânia at their health care unit, lasting 20 minutes. Provide the questionnaire to the doctors who choose to participate. Each doctor delivers the questionnaire to his patients for 3 consecutive months (in the case of pediatricians, to the parents of the patients). The questionnaire should be provided in the waiting room through an administrative secretary or a nurse, and when patients enter the appointment, they already carry the completed questionnaires. The doctor classifies the questionnaire and explains to the patient the wrong answers. Subsequently, a statistical analysis as to be carried out with grouping of data in excel charts and statistical study done in SPSS.

#### 4. Questions to discuss:

Are the Family Doctors informed enough about e-cigarettes to discuss them with their patients?

Are our patients miss informed about the use of e-cigarettes? Do they think the e-cigarets are harmless?

Our patients are becoming dual smokers – vaping and smoking concomitantly?

Our patients are changing traditional smoking to vaping e-cigarettes? Why?

Are the parents aware of the possible harming of their kids done by vaping e-cigarets near them?

#### **Declaration of Interest**

The authors have no conflict of interest to declare.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8611

Presented at: Resumos em Português e Castelhana – Apresentações orais 31/05/2018 09:00-10:35

### Electronic cigarettes smokers attending Primary Care : how can we help them?

Franco César Maurício Rabi Costa<sup>1</sup>, Dyna Torrado<sup>2</sup>

<sup>1</sup>UCSP Silves, Alcantarilha Health Center. Algarve Regional Health Administration, <sup>2</sup>UCSP Mar, Tavira Health Center. Algarve Regional Health Administration. Portugal

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#### **Research Question** How can we help e-cigarettes smokers who attend Primary Care to quit?

Characterize the consumption and attitudes towards e-cigarettes smoking users in Primary Care (PC) in order to learn how can we help them.

That includes:

- Knowing the motivations and objectives of these smokers to choose e-cigarettes.
- Determining the intention to quit and cessation rates among e-cigarettes smokers.
- Assessing if the use of e-cigarettes helps our patients to quit.
- Defining the smoker's profile that can best benefit from using e-cigarettes as well as best consuming time and intensity.
- Determining smoker's knowledge about pros and cons of e-cigarettes versus conventional therapies.
- Evaluating what percentage of e-cigarettes smokers would accept to switch to conventional therapies.
- Listing main e-cigarettes declared side effects.

**Background** Nowadays some smokers choose to use e-cigarettes in attempt to quit smoking/reduce consumption without medical intervention as well as they seek PC health professionals help to quit using e-cigarettes. Most of us don't know how to help them. Following up these e-cigarettes users would increase our knowledge about e-cigarettes consumption and could improve our working methodology in order to get better results in tobacco cessation rates.

**Possible Methodology:** Create a database for monitoring all patients who declare smoking e-cigarettes in our practice after the brief intervention. Measure exhaled carbon monoxide, weight, anxiety and depression levels before and after cessation.

#### **Questions to Discuss**

- How could we create an international database and what variables should we include ?
- Which users should we follow, only those who want to quit smoking ?
- Should we exclude those who smoke conventional tobacco at the same time ?
- How long should be the follow up period ?
- Is there any similar study going on ?

#### **Declaration of Interest**

The authors declare they have no competing interests.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8690

Presented at: 8.1 Tapas/Petiscos Best Practice from IPCRG Members - Adding Value to Your Practice 02/06/2018 09:00-10:20

### Engaging primary health care professionals on brief intervention on tobacco – a quality improvement project on three Portuguese healthcare centres

Marlene Alves Freire, Ana Borges, Miguel Louro  
*USF Santa Maria da Benedita*

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**Research question:** Are education sessions, access to handouts or performance-based scenarios of appointments a point of interest to increase the rate of brief intervention (BI) to doctors and nurses in primary care?

**Background:** It's known that professional intervention, mostly by doctors has the power to increase the probability of smoking cessation – namely through BI. Previous reviews showed that the involvement of the healthcare professionals on sessions on this matter increases the rate of smoking detection, the rate of counselling and consequently the smoking cessation.

**Possible methodology:** Firstly, we deliver a questionnaire through email to doctors and nurses of three different healthcare centres teams in ACeS Oeste Norte. We intend to understand if many professionals approach tobacco questioning, if not, why is it; and assess if healthcare professionals know BI on tobacco as a method and how regularly they use it. We want to understand if the professionals are interested in receiving information and guidance on this matter.

We intend to deliver four sessions over a period of 8 months. During those sessions BI is going to be explained and identified the pertinence to intervene with patients with different healthcare issues/status: hypertension, diabetes, respiratory diseases, pregnancy, childhood/adolescence. Through hand-outs (for fast search of information), practical exercises and videos we want to recruit professionals to engage on BI more frequently. These videos intend to set the time and place so that healthcare professionals can try and do it in a controlled environment, showing how little time-consuming this is.

In the end we are going to deliver the same questionnaire to evaluate change.

It will be necessary to recruit fellow colleagues to deliver the sessions and intervene on two healthcare centres. For this we have structured the sessions in a script so that the same is reproduced. With regarding to the funding we intend to do this work only with our means.

**Questions to discuss:** Was the information given relevant for a practice change? Do the health professionals feel more confident approaching tobacco subject and smoking cessation after the sessions? Were the sessions of added value?

**Declaration of interest:** None of the authors have a conflict of interest to report.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8471

Research Ideas Posters 31/05/2018 09:00-10:00

### **Environmental Factors, Pulmonary and Dermatologic Vulnerability among Biomass Exposed Families Living Near and Far from a Coal Stockpile Facility in Manila**

ma loida Sajonas, Jonathan Babsa-ay  
*UP-PGH*

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**Primary Investigator:** Ma. Loida A. Sajonas, MD **Supervising investigator:** Jonathan Babsa-ay, MD

University of the Philippines -Philippine General Hospital Department of Family and Community Medicine, Manila, Philippines

**Rationale:** In the Philippines where it is naturally abundant, Coal is mainly used in power generation accounting to about 44.5% in 2015. The demand in the use of coal in the country remains steady despite its impacts on the environment and human health. About 960 premature deaths each year is recorded due to stroke, ischemic heart disease, other cardiovascular diseases and respiratory illnesses as a result of exposure to existing coal-fired power plants in the country.

**Research Question:** Among households in Tondo, Manila living near and far from a coal stockpile facility, what are the self-reported pulmonary and dermatologic symptoms, pulmonary diseases and its associated environmental factors using a cross-sectional study?

**Objectives:** To compare commonly self-reported pulmonary and dermatologic symptoms, respiratory diseases and associated environmental factors among households living near and far from a coal stockpile facility in Tondo, Manila

**Method:** A cross-sectional study design will be used. Data will be collected by conducting interviewer-assisted questionnaires. The study participants will be selected from the recruited households sampled via systematic sampling based on the inclusion/exclusion criteria. The participants height, weight and BMI will be taken, and will then undergo spirometry, with or without the symptoms.

**Results:** Preliminary results will be presented at the 9th IPCRG scientific meeting. Outcome variables to be measured are the following: Demographic data, General Health History, Current or most relevant employment, Exposure information, Environmental Non occupational factors, Access to Health Resources and Spirometry results.

**Declaration of interest:** None

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8657

5.6 Digital Poster Discussion 3 01/06/2018 11:50-13:00

### Estimating the burden of Chronic Respiratory Disease in adults in Asian low and middle income countries: a RESPIRE research proposal

Dhiraj Agarwal<sup>1</sup>, Samir Saha<sup>2</sup>, Rita Isaac<sup>3</sup>, Khoo Ee Ming<sup>4</sup>, Osman Yusuf<sup>5</sup>, Sundeep Salvi<sup>6</sup>, Richard Parker<sup>7</sup>, Hilary Pinnock<sup>7</sup>, Sanjay Juvekar<sup>8</sup>

<sup>1</sup>KEM Hospital Research Centre, <sup>2</sup>Dhaka Shishu Hospital, Bangladesh, <sup>3</sup>Christian Medical College, India, <sup>4</sup>University of Malaya, Malaysia, <sup>5</sup>The Allergy & Asthma Institute, Pakistan, <sup>6</sup>Chest Research Foundation, India, <sup>7</sup>University of Edinburgh, <sup>8</sup>KEM Hospital Research Centre, India

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#### Research Question

What is the prevalence of COPD and asthma (and other CRD) amongst adults (18 years and above) in Bangladesh, India, Malaysia, and Pakistan, and what are the risk factors, and healthcare utilization associated with these conditions?

#### Background

Chronic Respiratory Diseases (CRD), especially asthma & chronic obstructive pulmonary disease (COPD), are common public health problems across the world. Although the majority of deaths and disability occur in developing countries, there are few data on the true prevalence of asthma and COPD in these countries. Existing prevalence studies have used questionnaires and spirometry to detect COPD, but have not used an objective approach to identify asthma, and 'other CRD' such as sequelae of TB, lung cancer, interstitial lung disease, bronchiectasis, cystic fibrosis etc.

#### Possible methodology

We, therefore, propose to:

- Undertake a systematic review to explore existing questionnaires and protocol used in LMICS to identify CRDs, enabling us to refine our protocol.
- Undertake a survey in four countries (Bangladesh, India, Malaysia, and Pakistan) to determine the prevalence of asthma, COPD and other CRDs in the community, using robust random sampling strategies, and quality assured spirometry undertaken by field workers.
- Pulmonologists will review all CRD cases and a random sample of 50 patients from each category of 'asymptomatic with normal spirometry' and 'asymptomatic with abnormal spirometry' to validate the accuracy of the screening protocol in each country.
- Assess the risk factors associated with the development of asthma, COPD or other CRD/symptoms in the four countries.
- Establish a RESPIRE cohort which will offer the opportunity to undertake future research (e.g. evaluation of interventions for people with asthma & COPD).

#### Questions to discuss

Should we use fixed ratio or lower limit of normal to diagnose obstruction? How should we make a robust diagnosis of the variable condition of asthma?

#### Declaration of Interest

Funder: NIHR Global Health Research Unit on Respiratory Health (RESPIRE)

References and Clinical Trial Registry Information: N/A

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8672

Presented at: 5.5 Oral Abstracts 6 Research Ideas 01/06/2018 11:50-13:00

### Exploration of pneumonia related policy formation and implementation in Pakistan- a RESPIRE project

Tabish Hazir<sup>1</sup>, Hana Mahmood<sup>1</sup>, Syed Yahya Sheraz<sup>2</sup>

<sup>1</sup>MNCHRN, <sup>2</sup>International Research Force

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Research question: What is the situation of under-five pneumonia related policy environment in Pakistan?

Background: In Pakistan, numerous policies/strategies have been formulated in the past on WHO based pneumonia management which have been translated into various programs. Yet, pneumonia related mortality remains unchanged probably because these policies and programs have not been able to yield sustainable solutions. We, therefore, plan to understand the pneumonia related policy environment within Pakistan to identify gaps in the system in terms of conceptualization and implementation through a qualitative and social research approach. This study will be the first of its kind for under-five pneumonia and will guide policy makers for creating effective solutions to combat the disease.

Possible methodology: This study will be conducted in two phases. The first phase will be two pronged. Firstly, existing documents or information available on the subject will be explored and analyzed using an analytical framework. Secondly, we will identify how pneumonia related policies are conceptualized, developed, implemented and delivered through a qualitative approach by conducting in depth interviews and focus groups from key informants. Purposeful sampling will be employed and the sample size will be based on the point of theoretical saturation, although at least 40 interviews will be conducted (8 in each of the five administrative divisions) along with 5-7 FGDs. The second phase of the study will be accomplished through social network research by an interview based mapping technique to understand, discuss, and visualize how various actors influence pneumonia related outcomes. Data will be analyzed through Organizational Risk Analyzer (ORA) which is a meta-network assessment and analysis tool.

Questions to discuss:

1. What are the major pneumonia related strategies /policies existing in Pakistan?
2. How are these policies formulated and implemented with barriers and facilitators to implementation?

#### Declaration of Interest

Funding source is NIHR.

#### References and Clinical Trial Registry Information

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## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8587

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### Exploring the provision of supportive care for patients with severe, potentially life-threatening COPD in Malaysia: a RESPIRE qualitative study

Su May Liew<sup>1</sup>, Ee Ming Khoo<sup>1</sup>, Hilary Pinnock<sup>2</sup>, Sylvia McCarthy<sup>3</sup>, Yong Kek Pang<sup>1</sup>, Nik Sherina Hanafi<sup>1</sup>, Norita Hussein<sup>1</sup>, Marilyn Kendall<sup>2</sup>

<sup>1</sup>University of Malaya, <sup>2</sup>University of Edinburgh, <sup>3</sup>Hospis Malaysia

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#### 1. Research question

How do the Malaysian health/social care systems support (or not) people with severe chronic obstructive pulmonary disease (COPD)? What are the barriers, facilitators and solutions to providing supportive and palliative care from the perspectives of patients, healthcare providers and policy makers?

#### 2. Background

COPD exerts great physical, psychological, social and spiritual toll. Yet, the supportive needs of severe COPD are frequently unmet. In Malaysia, palliative services are almost non-existent for those with COPD. For patients, as well as healthcare providers and policy makers, there is a lack of knowledge and understanding of the role of supportive care.

#### 3. Methodology:

This will be a qualitative study using semi-structured interviews. We will recruit professionals (respiratory, palliative or primary healthcare providers in Klang Valley); policy makers (hospital, primary care or palliative care division, Ministry of Health, Malaysia); patients (GOLD Stage 4 severity markers; a physician who would 'not be surprised if their patient were to die in the next 12 months'). Recruitment will continue until data saturation is achieved.

Interviews will be audio-recorded and transcribed verbatim. Issues covered with patient participants will include the experience of living with COPD, their main concerns, views on their care and how services may be improved. Issues covered with health care providers will include their experiences and concerns looking after people with severe COPD and how care may be improved. Data will be analysed using a thematic approach.

An end of study workshop will enable feedback to stakeholders, increase awareness and formulate proposals for future service development.

#### 4. Questions to discuss:

How can we recruit 'hidden' patients currently not accessing services? Are there other stakeholders (faith leaders, community workers, etc)? What strategies can we use to engage stakeholders from the outset?

#### Declaration of Interest

Funding: NIHR Global Health Research Unit on Respiratory Health (RESPIRE)

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8462

Presented at: 3.6 Digital Poster Discussion 1: Teaching & Behavioural Interventions 01/06/2018 09:00-10:20

### First Slovenian anti-smoking media campaign

Sanja Zupanic, Danica Rotar Pavlic  
*Slovenian Association of Family Physicians*

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#### Aim

The aim is to conduct first Slovenian anti-smoking media campaign. Our goal is to publish the advertisement on social media (Facebook – the main target group is 840.000 users, which represents 42 % of Slovenian population, mainly the age group 14 – 40 years old) and Slovenian national TV. The advertisement will be preliminarily shown in the first months of year 2018.

#### Brief outline of context

The prevalence of smoking in Slovenia is higher in comparison with an average high-income country (24,2 % in year 2014). Unfortunately, the prevalence of smoking is not decreasing (24,9 % in year 2007). In year 2017 Slovenian government accepted an anti-tobacco law. Good aspects of this new law are graphic warnings on the cigarette boxes. It also increased the taxes for all tobacco products. Slovenia offers a free Quitline and free smoking cessation programmes. At the primary level, residents can attend the CINDI workshops entitled “Yes, I quit smoking”.

#### Brief description of the change/intervention and why you thought it would work and effects of changes

This advertisement was already published in more than 20 different countries around the world. According to data from abroad, the “Sponge” advertisement was very successful, both in recall and quit attempts. In Norway and Senegal, the “Sponge” campaign generated 68% and 63% recall, respectively, and motivated 59% and 22% of people to make quit attempts respectively.

#### Strategy for change (who, how, following what timetable) and effects of change

With help from Vital Strategies we gained the copy-rights to translate and publish Australian most successful anti-smoking commercial, the “Sponge”, produced by Cancer Institute (NSW) Australia. The commercial lasts 30 seconds, it contains an effective graphic animation, special sound effects and five clear, simple sentences. We translated this text into Slovenian with some help of an expert for the Slovenian language. We tested the Slovenian version of the text on 10 Slovenians from different age groups (16 to 60 years old), both genders and different education levels, who confirmed they understood the contents well. Project promoters are the following: *Slovenian Association of Family Physicians*, Faculty of Medicine – University of Ljubljana and Slovenian heart foundation.

#### Message for others

We hope this campaign would encourage and persuade Slovenian Ministry of Health to finally begin with the big national anti-smoking mass media campaigns. We would like to discuss the implementation of the media campaign with the members of IPCRG.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8603

Research Ideas Posters 31/05/2018 09:00-10:00

### GP's perspective on "smoking program" at a Family Health Unit – does it really help?

Ana Fidalgo Lopes Sequeira, Vera Araújo  
*USF Lethes*

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#### 1. Research question

Does the use of the "smoking program" of SClínico® software (electronic medical records) by General practitioners (GPs) at a Family Health Unit facilitate brief interventions for smoking cessation, when comparing to no use of such program?

#### 2. Background

Recently, it was introduced in SClínico® software a "smoking program", providing the Family Doctor with a series of resources for helping patients to quit tobacco smoking – smoking units calculator, previous attempts to quit smoking, reasons to smoke, questionnaires on the "willingness to quit" and "addiction to nicotine" and handouts for patients to read at home.

What is still unknown is the GP's perspective on this program. Do they use it every time? Is it helpful? Does it reduce time in consultation?

#### 3. Possible methodology

Cross-sectional study. Population of the study: all the GPs working at a Family Health Unit. No sampling method and randomization will be applied, as studying the whole population.

A questionnaire will be designed to address the following topics: use of smoking program in consultation, time consumption in consultation, benefits of use for the GP and benefits on doctor-patient relationship, benefits in smoking cessation and potential risks. It will be given to the GPs and it should be answered anonymously.

All answers will be collected and a descriptive statistical analysis will be performed using Microsoft Excel®.

#### 4. Questions to discuss

- The need to study more than a family health unit, and, if advisable, the recruitment criteria.
- The questionnaire topics and questions.

#### 5. References

- Directorate-General of Health (2012-2016). National program for smoking prevention and control.
- Directorate-General of Health (2017). Program guidelines to 2020.
- World Health Organization (2004). WHO European strategy for smoking cessation policy.

#### Declaration of Interest

The authors have nothing to declare.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8643

Presented at: 5.5 Oral Abstracts 6: Research Ideas 01/06/2018 11:50-13:00

### Identifying undiagnosed COPD amongst the general population in China: a screening test accuracy study (protocol)

Zihan Pan<sup>1</sup>, Andy Dickens<sup>2</sup>, Chunhua Chi<sup>1</sup>, Zhennan Qi<sup>1</sup>, Xia Kong<sup>1</sup>, Chang Gao<sup>1</sup>, Peymane Adab<sup>2</sup>, Kk Cheng<sup>2</sup>, Alice Sitch<sup>2</sup>, Rachel Jordan<sup>2</sup>

<sup>1</sup>Department of General Practice, Peking University First Hospital, China, <sup>2</sup>Institute of Applied Health Research, University of Birmingham, Birmingham, UK

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#### Research question

What are the most cost-effective screening strategies for identifying undiagnosed COPD in the general population in China?

#### Background

In China, the latest estimates suggest COPD is the 4th leading cause of death in urban areas and 3rd in rural areas, with 1.28 million deaths annually. COPD also has high rates of under-diagnosis in China; there are 38m people with diagnosed COPD and estimated more than 60m with undiagnosed disease. The prevalence rate from population screening studies in people  $\geq 40$  years old was 8.2% in 2007, and 9.9% in 2015. However, only 35.1% of those with airflow obstruction on spirometry had previously been diagnosed with COPD.

#### Possible methodology: (eg research methods, design, population, recruitment, funding)

Design: Cross-sectional study (screening test accuracy).

Population: Aged  $\geq 40$  years, living in Beijing (North), Chengdu (South West), Guangzhou (South) or, Shenyang (North East).

Recruitment: Participants will be recruited from two sources; hospital health checks and locality offices. A maximum of 2,600 participants will be recruited to the study.

Outcome measures: Participants will conduct index and reference tests on the same day. Index tests will include COPD screening questionnaires, peak flow and microspirometry. The reference test (diagnosed COPD) is defined as clinical diagnosis by a pulmonologist and airflow obstruction based on the lower limit of normal (GLI), according to quality diagnostic spirometry. Test performance (e.g. sensitivity, specificity) of all screening tests and strategies will be compared against quality diagnostic spirometry, with cost effectiveness analysis.

#### Questions to discuss

Should we screen the general population, or target 'at risk' populations?

What are the likely challenges of conducting a study in four different cities in China?

#### Declaration of Interest

#### Declaration of Interest (including funding source and trial registration as appropriate)

The authors declare no conflicts of interest. The research is funded by NIHR Global Health Research, as part of the Breathe Well programme.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8601

Presented at: 6.6 Digital Poster Discussion 4: Diagnosis & Assessment 01/06/2018 14:25-15:45

### Identifying undiagnosed COPD in patients with systemic arterial hypertension in Brazil: a screening test accuracy study (protocol)

Sonia Maria MARTINS, Andy Dickens Andy, Rafael Stelmach Rafael, Aldo A Albuquerque Neto Aldo, Peymane Adab Peymane, Alice Sitch Alice, Rachel Jordan Rachel  
*Breathe Well Group*

**Research question:** What are the most cost effective screening strategies for identifying undiagnosed COPD in Brazil, amongst patients with systemic arterial hypertension?

#### Background:

COPD and systemic arterial hypertension (SAH) are often underdiagnosed and inadequately treated in primary care settings in Brazil. In the city of São Bernardo do Campo, there is a high prevalence of SAH, and COPD is a common comorbidity. In a situation where resource constraints are evident, diagnosing COPD patients more effectively is a current challenge. This study aims to evaluate the sensitivity, specificity and cost-effectiveness of different screening strategies, comparing screening questionnaires, hand-held micro-spirometry and peak flow.

#### Possible methodology: (eg research methods, design, population, recruitment, funding):

Design: Cross-sectional study (screening test accuracy).

Population: Diagnosed SAH patients, aged  $\geq 40$  years.

Recruitment: Participants will be recruited from hypertension clinics within 9 basic health units in São Bernardo do Campo. Patients will be excluded if they cannot understand the study consent form or are contraindicated for spirometry. A maximum of 2000 patients will be recruited.

Outcome measures: Participants will conduct index and reference tests on the same day. Index tests will include COPD screening questionnaires, peak flow and microspirometry. The reference test (diagnosed COPD) is defined as clinical diagnosis by a pulmonologist and airflow obstruction based on the lower limit of normal (GLI), according to quality diagnostic spirometry. Test performance (e.g. sensitivity, specificity) of all screening tests and strategies will be compared against quality diagnostic spirometry.

#### QUESTIONS TO DISCUSS:

Should screening strategies be used instead of universal quality diagnostic spirometry?

Could screening questionnaires and/or microspirometry be used for COPD screening in a non-specialized healthcare scenario?

Should COPD screening be conducted in smokers aged  $\geq 40$  years regardless of respiratory symptoms?

#### Declaration of Interest

The authors declare no conflicts of interest. The research is funded by NIHR Global Health Research, as part of the Breathe Well programme.

#### References and Clinical Trial Registry Information

1. **Rabahi MF.** Prevalence of chronic obstructive pulmonary disease among patients with systemic arterial hypertension without respiratory symptoms. *International Journal of COPD*, 2015.
2. **Haroon et al.** Effectiveness of case finding strategies for COPD in primary care: a systematic review and meta-analysis. *NPJ Primary Care Respiratory Medicine*, 2015.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8682

Presented at: 5.5 Oral Abstracts 6: Research Ideas 01/06/2018 11:50-13:00

### Implementing a respiratory intervention in a poor and rural community in Tamil Nadu

Rita Isaac<sup>1</sup>, David Weller<sup>2</sup>, John Norrie<sup>2</sup>, Liz Grant<sup>2</sup>

<sup>1</sup>Christian Medical College, Vellore, <sup>2</sup>University of Edinburgh

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#### Research Questions

1. What are the 'baseline' levels of risk factors, levels of awareness of chronic respiratory diseases, and compliance with treatment pathways, in patients with CRD in our population?
2. What is the impact on all of the above measures, of a health care worker (HCW)-delivered respiratory intervention?
3. How can the findings from this 'RESPIRE' study be used to implement similar HCW-delivered respiratory interventions in other low-resource, low-health-literacy settings?

#### Background:

Chronic respiratory disorders (CRD) in rural regions of India are common, but often neglected and poorly diagnosed - leading to missed opportunities for treatment. There is typically poor understanding in rural communities of the causes of respiratory illness; many symptoms are incorrectly attributed to 'asthma' and treatment is often based on inaccurate diagnoses. Lung cancer is particularly neglected, and often goes undiagnosed. Christian Medical College (CMC), Vellore, India and the University of Edinburgh have a long-standing partnership which has delivered HCW-based interventions for a range of conditions (such as cancer screening). Our target population is adults living in an rural area of Tamil Nadu; this is a 'hard-to-reach' population with limited health literacy.

#### Methods:

We will conduct the study in 12 of the 18 RUHSA Peripheral Service Units (PSUs) comprising 3-4 villages (PSUs will be the 'clusters') in the context of a step-wedge, cluster RCT. This design involves random and sequential crossover of clusters from control to intervention until all clusters are exposed. Intervention clusters will receive an enhanced respiratory intervention package, or standard care, in a step-wedge design. The enhanced HCW-delivered intervention will include participant education in a group setting and participant house visits for symptom assessment, treatment compliance, referral and follow-up on improvement. The study will target adults aged 18 and over who have a recorded history of CRD residing in K.V Kuppam rural development block (a 'block' is the administrative unit of a district) serviced by the Rural Unit of Health and Social Affairs, CMC. Participant recruitment will be by PSU with an estimated 100 patients each. Key outcomes will be knowledge of CRD risk factors and key causes of CRD (including infections and lung cancer), and compliance with CRD care pathways.

#### Discussion points:

We are keen to share experiences of other researchers in

- HCW-delivered respiratory interventions in low-resource, low-health-literacy settings
- the efficacy of community-based education in these challenging settings
- merits and disadvantages of our proposed step-wedge RCT design in this kind of setting.

#### Declaration of Interest

nil

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8671

Presented at: 5.5 Oral Abstracts 6 Research Ideas 01/06/2018 11:50-13:00

### Implementing multiple interventions to improve respiratory care & health in resource-constrained FRESH AIR countries: Impact, Barriers, Levers & Lessons Learned

James Stout<sup>1</sup>, Liza Cragg<sup>2</sup>, Siân Williams<sup>2</sup>, Louise Warren<sup>1</sup>

<sup>1</sup>University of Washington, <sup>2</sup>IPCRG

#### 1. Research question

What can clinical and healthcare decision-makers learn from the FRESH AIR project about implementation of multiple interventions to improve respiratory care and health in four Low- or Middle Income Countries (LMICS)?

#### 2. Background

The WHO estimates around 90% of deaths from COPD and 80% deaths from asthma occur in LMICs due to population size and increasing prevalence of risk factors. FRESH AIR, a major international research collaboration, has undertaken a range of linked implementation science studies in four LMICs.[i] These studies examine the burden and awareness of chronic lung diseases, and how interventions effective in high income countries, clustered into five work packages (WP), can be implemented in diverse resource-constrained settings. This research idea explores the impact, barriers and levers identified by the project's WP and country leads. Lessons learned should inform future implementation efforts in LMICs at an individual, health system and population level.

#### 3. Proposed methodology

The proposed study would include:

- A table format questionnaire for each country and WP lead on the impact, main barriers, levers and lessons for researchers, clinical and policy decision-makers that might influence the sustainability of successful interventions.
- A structured interview with researchers, country and WP leads involved in FRESH AIR.

The study would be undertaken as part of Work Package 2 of the FRESH AIR project. Authors would include the researchers of Work Package 2.1 and others who have been active in FRESH AIR.

#### 4. Questions to discuss How can:

- The study capture and assess the value of respiratory leadership in each country and how this has contributed to the project?
- The study ensure objectivity when relying on key informants who are invested in the project's success?
- The study most effectively analyse the qualitative information generated by the proposed methodology?
- End-users of the intervention contribute?
- The study draw out differences and similarities across countries and WPs?

Ideally, what recommendations would be made at the three levels of individual, health system and population, and how best to plan data collection?

#### Declaration of Interest

FRESH AIR was funded by the EU Research and Innovation program Horizon2020 under grant agreement no. 680997. This study is registered under trial registration number: NTR5759.

<http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>References and Clinical Trial Registry Information: i. Cragg L, Williams S, Chavannes NH on behalf of the FRESH AIR Group. FRESH AIR: an implementation research project funded through Horizon 2020 exploring the prevention, diagnosis and treatment of chronic respiratory diseases in low-resource settings. *Npj Prim Care Respir Med* [Internet];2016 Jun 30;26:16035. Available from:<http://rdcu.be/twwC>

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8693

Research Ideas Posters 31/05/2018 09:00-10:00

### Influenza vaccination knowledge and beliefs among pregnant women

Hande İleri<sup>1</sup>, Umut Gök Balcı<sup>1</sup>, Alper İleri<sup>2</sup>, Can Ata<sup>2</sup>

<sup>1</sup>*Sağlık Bilimleri University İzmir Tepecik Research And Training Hospital Family Medicine Department,* <sup>2</sup>*Buca Maternity and Children Hospital, Department of Obstetrics and Gynecology*

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**AIM:** Pregnant women at risk of severe complications and death resulting from influenza. There is a need to understand the factors underlying low rates of vaccine uptake and evaluate various facilitators and barriers to maternal influenza vaccination. Our aim to determine the uptake of influenza vaccination, knowledge and beliefs among pregnant women

**METHODS:** A questionnaire-based self-administered survey was taken among pregnant women who visited the Department of Obstetrics and Gynecology, Buca Maternity and Children Hospital in Izmir, December 2017.

**RESULTS:** 30 pregnant women aged between 17-41 participated. %73.3 women were unemployed and %70 were completed elementary education. %80 pregnant women received health care by obstetrician. %23.4 of pregnant women were in the first trimester, %36.6 were in second and %40 of them in the third trimester. Influenza vaccine uptake in pregnant women was very low by two pregnant women. When women who had no flu vaccination asked about the reasons; %66.6 stated that they had insufficient information about the vaccination, %23.3 declared that they have considered flu shot could have severe consequences for baby, 13.3 of them agreed they would have the vaccine if their doctor recommended it. %76.6 women surveyed reported they had received no recommendation

to have influenza vaccination by health care provider, %66.6 of women had no notice from media or their social circles. %86.6 of respondent had no knowledge that if a pregnant woman received the vaccine, their infant would be protected against the disease. Similar rates also demonstrated in pregnant women had no idea if the vaccination was provided free through their health care provider.

**CONCLUSION:** In this preliminary study with limited patient population, we observed pregnant women were ignorant about influenza shot. Meanwhile we assessed that healthcare providers were lacking about giving vaccination consultancy. Educational material targeting pregnant women and professional education, support for antenatal health care providers are needed to increase awareness and recommendation. Given the socioeconomic status of pregnant women and mostly of them referring to obstetricians, there is a need to new studies in different populations and primary care providers. Our plan is conducting a new project on this subject with causes and results.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8479

Presented at: Resumos em Português e Castelhana – Apresentações orais 31/05/2018 11:00-12:45

### **Inhaler technique education in elderly patients with Asthma or COPD: impact on disease exacerbations – a protocol for a single-blinded RCT**

Tiago Maricoto<sup>1</sup>, Jaime Correia-de-Sousa<sup>2</sup>, Luís Taborda-Barata<sup>3</sup>

<sup>1</sup>Family Doctor - USF Aveiro-Aradas, Aveiro Healthcare Centre; PhD Student - Faculty of Health Sciences - University of Beira Interior, Covilhã, <sup>2</sup>Family Doctor - Horizonte Family Health Unit, Matosinhos; Life and Health Sciences Research Institute (ICVS)/3B's — PT Government Associate Laboratory, University of Minho, Braga, <sup>3</sup>CICS - Health Sciences Research Centre, University of Beira Interior, Covilhã; NuESA – Environment & Health Study Group, Faculty of Health Sciences, University of Beira Interior, Covilhã; Department of Allergy & Clinical Immunology, Cova da Beira University Hospital Centre, Covilhã

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#### Significance and Background

COPD and Asthma affect more than 10% of the population, and inhaler therapy is the main way to treat these patients. However, most patients use their inhaler incorrectly, mainly the elderly, who are more susceptible to poor clinical control and exacerbations. Placebo device training is regarded as one of the best teaching methods, but there is scarce evidence to support it as the most effective one to improve major clinical outcomes.

#### Research Question:

Our objective is to perform a single-blinded randomised clinical trial, in order to assess the impact of an inhaler technique education with placebo devices in these patients, upon major clinical outcomes.

#### Methods:

A multicentre single-blinded RCT will be set, comparing a placebo-device training programme versus usual care, with a one-year follow-up, in elderly patients with Asthma or COPD. Intervention will be provided at baseline, and after 3 and 6 months, with interim analysis at an intermediate time point. Exacerbation rates were set as primary outcomes, and quality of life, adherence rates, clinical control and respiratory function were chosen as secondary outcomes. A sample size of 146 participants (73 in each arm) was estimated as adequate to detect a 50% reduction in event rates. Two-sample proportions Chi-squared test will be used to study primary outcome and subgroup analysis will be carried out according to major baseline characteristics.

#### Questions to Discuss

This is the first study to address, in an isolated manner, a specific inhaler teaching method in this subgroup of elderly patients. We expect to observe approximately 55 adverse events, 18 in the intervention group and 37 in the control group, and to confirm the hypothesis that the intervention group will have a significant improvement in clinical and functional parameters during the follow-up.

#### **Declaration of Interest**

The authors declare no conflict of interest.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. This work was developed without any funding support or financial source.

This work was prepared with scientific support from Harvard Medical School, in accordance with the Portuguese Clinical Scholarship Research Training Program. The authors also endorse acknowledgment to Prof. Jonh Groarke, from the Harvard Medical School, for his important scientific support and input in reviewing the final version of this manuscript.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8620

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### Investigating the impact of haze on asthma events: a RESPIRE proposal

Ee Ming Khoo<sup>1</sup>, Hilary Pinnock<sup>2</sup>, Norita Hussein<sup>1</sup>, Nasrin Aghamohammadi<sup>1</sup>, Su May Liew<sup>1</sup>, Nik Sherina Hanafi<sup>1</sup>, Li Ping Wong<sup>1</sup>, Ahmad Tajuddin Mohamad Nor<sup>3</sup>

<sup>1</sup>University of Malaya, <sup>2</sup>The University of Edinburgh, <sup>3</sup>Hospital Tengku Ampuan Rahimah, Klang

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#### 1. Research question

What is the association between the Air Pollution Index (API) levels and the rate of asthma exacerbations, nebuliser use and hospital admissions ('asthma events') over a 5-year period?

#### 2. Background

Haze occurs yearly in Malaysia due to widespread forest fires and open burning of agricultural land in the region. Studies have associated air pollution with increased outpatient attendance and hospital admissions for asthma and an immediate and delayed effect on mortality and the economy. Two severe and prolonged trans-boundary haze episodes occurred in 2013 and 2015.

#### 3. Possible methodology:

Retrospective analysis of routine data:

1) Data on emergency attendance for asthma exacerbations, nebuliser use, and hospital admissions due to asthma from 2012 to 2016 will be collected from medical records in a public hospital in Klang, Malaysia.

2) Data on daily air quality, as defined by the Air Pollution Index (API) measurements taken from stations located closest to the hospital during the period will be obtained.

We will calculate correlation coefficient between asthma events and API. A prediction model will be used to determine threshold levels of API that predict risk of asthma exacerbation to enable air pollution alerts to be issued.

#### 4. Questions to discuss:

Which prediction model can best determine the API thresholds for predicting risk of acute exacerbations? What time frame would be anticipated for a pollution related peak in asthma events? How to account for the timing of the alert?

#### Declaration of Interest

Funding: NIHR Global Health Research Unit on Respiratory Health (RESPIRE) research proposal

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8598

Research Ideas Posters 31/05/2018 09:00-10:00

### Is the use of a combined treatment of LABA+LAMA based on guidelines recommendations in patients with stable COPD in primary care?

Vidal Barchilon<sup>1</sup>, Manuela Marquez<sup>2</sup>, Antonio Leon<sup>3</sup>

<sup>1</sup>Servicio Andaluz de Salud. Distrito S Bahía de Cádiz La Janda, <sup>2</sup>Servicio Andaluz de Salud DAP, <sup>3</sup>Servicio Andaluz de Salud. Hospital SAS Cádiz

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#### Research Question

Is the use of a combined treatment of LABA+LAMA based on guidelines recommendations in patients with stable COPD in primary care?

#### Background

COPD is the 4th leading cause of death in the world with increasing economic and social burden, in primary care is one of the most frequent respiratory diseases, with high morbidity and mortality. In our population, it is related with tobacco use, and we have a high prevalence of current smokers.

Inhaled bronchodilators medications are the most important treatments to prevent or reduce symptoms in COPD. The two main types we use in these patients are long-acting beta2- agonist (LABA) and long-acting antimuscarinic antagonist (LAMA).

Recently, last year's new guidelines, has defined some conditions where the use of combining bronchodilators with different mechanisms may increase the degree of bronchodilation with a lower risk of side-effects compared to increasing the dose of a single bronchodilator, improving COPD symptoms and quality of life.

We want to know the use of combining bronchodilators in COPD patients in our primary care settings, the characteristics of this people and whether this prescription are in accordance with COPD guidelines.

#### Possible Methodology

We are going to collect all LAMA + LABA prescriptions of twenty-two primary care settings during a three-month's period, in our regional health service in patients with COPD diagnostic.

We will use our prescription program of our regional health service.

We will review medical records of a sample of patients we have detected with this prescription.

#### Questions to Discuss

- To evaluate the difference between real life management and guidelines management and the compliance
- To know patients' characteristics with combine treatment with LABA+LAMA in real life in primary care

#### Declaration of Interest

None

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8677

Presented at: 5.5 Oral Abstracts 6 Research Ideas 01/06/2018 11:50-13:00

### Mapping of Pollen Allergens with Asthma Morbidity in Select Cities in Pakistan to identify associations and potential triggers: a RESPIRE proposal

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<sup>1</sup>RESPIRE-Pakistan / The Allergy & Asthma Institute, Pakistan, <sup>2</sup>RESPIRE - University of Edinburgh, <sup>3</sup>Usher Institute, The University of Edinburgh, <sup>4</sup>RESPIRE-Pakistan / The Allergy & Asthma Institute, Pakistan., <sup>5</sup>Pakistan Meteorological Department, <sup>6</sup>King Faisal Specialist Hospital and Research Centre, Riyadh, Kingdom of Saudi Arabia, <sup>7</sup>RESPIRE-Pakistan / IRF, <sup>8</sup>The Allergy & Asthma Institute, Pakistan, <sup>9</sup>MEDICSI, Islamabad, <sup>10</sup>Rehman Medical Institute, Peshawar, <sup>11</sup>Pakistan Museum of Natural History, <sup>12</sup>COMSATS University, Islamabad, <sup>13</sup>Quaid i Azam University, Islamabad, <sup>14</sup>TB Control Programme, Peshawar, <sup>15</sup>Programme Manager, Public Health Dept, Peshawar

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**Research Question:** We aim to identify correlations between peak levels of major pollen allergens and seasonal asthma morbidity in six locations in Pakistan, to identify candidate allergens and then to assess biological plausibility by assessing the sensitisation amongst people with seasonal asthma.

**Background:** In Islamabad, pollen-induced asthma attacks are anecdotally responsible for causing many deaths during seasons in which allergenic paper mulberry pollen counts crosses 40,000 grains/metre, making sensitised and susceptible people flee the city. Other cities suffer from seasonal asthma at different times of the year. If the likely causative agent(s) and their seasonality can be identified, then comprehensive, timely and effective preventative measures can be implemented.

#### **Possible method:**

In six rural and urban locations of Islamabad/Rawalpindi, Lahore and Peshawar offering diversity in pollen load, we will:

1. Monitor major pollen allergens and their seasonal profile over a 12-month period (with an additional 12 months if abnormal weather conditions affect pollen levels), using Rotorod Pollen samplers in each location.
2. Measure seasonal variation in asthma morbidity by monitoring prescribing of rescue medication, attendance at hospitals and primary care for acute asthma during the same period and in the same localities.
3. Use spatiotemporal modelling to link peaks in pollen levels with asthma morbidity, and to identify candidate allergens that could explain these correlations
4. Undertake skin prick testing to the candidate allergens in 75 people with a history of seasonal asthma from each of the locations to inform biological plausibility.

#### **Questions to discuss:**

Our focus is on pollen, but should we also consider the impact of pollution?

#### **Declaration of Interest**

**Funder:** NIHR Global Health Research Unit on Respiratory Health (RESPIRE): study proposal

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8507

Presented at: 8.1 Tapas/Petiscos Best Practice from IPCRG Members - Adding Value to Your Practice 02/06/2018 09:00-10:20

### Obstructive sleep apnoea in a family practice setting

Andrej Pangerc<sup>1</sup>, Marija Petek Šter<sup>2</sup>, Leja Dolenc Grošelj<sup>3</sup>

<sup>1</sup>Community Health Centre Bled, <sup>2</sup>Community health centre Trebnje, <sup>3</sup>Institute of clinical neurophysiology University medical centre Ljubljana

**Research question:** Can a two-step model of screening for obstructive sleep apnea be successfully developed and implemented in a family practice setting?

**Background:** Obstructive sleep apnea (OSA) is the most common disorder of breathing during sleep <sup>1</sup>. Obstruction caused by reduced muscle tone causes disturbances in the sleep cycle<sup>2</sup>.

OSA is associated with cognitive dysfunction, depression, impaired work performance, road accidents, insulin resistance and type 2 diabetes, heart failure, resistant hypertension and myocardial infarction. It decreases quality of life. There is little doubt that mortality is increased<sup>2</sup>. The prevalence of OSA, which is strongly associated with obesity, has increased from 3-7% to 9-25%<sup>3</sup>. 80% of patients go unrecognized<sup>4</sup>. The gold standard in diagnosing OSA is laboratory polysomnography. This, however, is too expensive, complicated and inaccessible for screening<sup>5</sup>. Type 3 polygraphy is easier and cheaper to perform<sup>6</sup>. Questioners have been developed<sup>5</sup>.

**Possible methodology:** Firstly, we aim to translate and validate the Epworth sleepiness scale (ESS) and STOP Bang questionnaire (SBQ) for the Slovenian user.

Secondly, patients that come to our three participating health centers within a one-year period will be asked to complete the ESS, SBQ and give demographic and medical information. Those found to be at risk according to either ESS or SBQ will complete at home type 3 polygraph, which they will set up by themselves, followed up by laboratory polysomnography. A proportion of low risk patients will undergo at home PG. In the eventuality that a pathological recording is noted they will undergo laboratory polysomnography.

In phase three we aim to validate the method developed.

### Questions:

- Thoughts about an open recruitment scheme.
- Can you suggest any sources of funding or collaboration?
- What pitfalls do you foresee?
- Any further suggestions?

**Declaration of Interest:** This study has no funding.

### References and Clinical Trial Registry Information

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2. L. Spicuzza et al. *Therapeutic Advances in Chronic Disease* (2015). 6,273-285, doi:10.1177/2040622315590318
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4. T. Young et al. Estimation of the clinically diagnosed proportion of sleep apnea syndrome in middle-aged men and women. *Sleep* 20,705-706 (1997).
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6. J.Corrall-Penafiel et al. *European respiratory review : an official journal of the European Respiratory Society* (2013). 22,312-324, doi:10.1183/09059180.00004213

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8719

Presented at: Resumos em Português e Castelhana – Apresentações orais 31/05/2018 09:00-10:35

### Opioids and treating dyspnoea

Jacqueline Silva<sup>1</sup>, Jacqueline Silva<sup>2</sup>, Helena Fragoeiro<sup>2</sup>, Sergio Freitas<sup>2</sup>

<sup>1</sup>Centro Saude de câmara de Lobos, <sup>2</sup>centro saude de câmara de lobos

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**QUESTION:** Can we use opioids to treat chronic conditions of dyspnoea?

**BACKGROUND:** Dyspnoea, “the subjective experience of breathing discomfort that consists of qualitatively distinct sensation that vary in intensity”, is very present in patients with disease of the heart or the lungs. The patient with chronic obstructive pulmonary disease (COPD), patients with lung cancer or pulmonary metastasis and heart failure have symptoms of dyspnoea.

Dyspnoea is a complex, multifaceted and highly personalised sensory and affective experience, the basis and mechanisms of which are incompletely understood.

To treat this symptom we need to treat the cause, but some times the disease is too advanced and the symptom persists. In these cases, the dyspnoea has great impact in the quality of life of the patient, and it is relevant to consider alternative treatment.

The use of opioids to treat dyspnoea in patients with terminal cancer has been determined, although and other diseases like COPD, heart failure doesn't exist a consensus.

**Methods:** Search for articles on this subject, published, using the keywords: “Dyspnoea and morphine, “Effect of morphine on breathlessness” and consultation of books and reference texts.

**Results:** The studies reveal that the use of opioids in the treatment of dyspnea in palliative care patients is a consensus and these are the main targets of this treatment. Studies by the group of Abdallah et al, on the use of morphine in the treatment of shortness of breath and endurance exercise in advanced COPD, show that in addition to acting at the level of the afferent nerve decreasing the sensation of dyspnea, they act as muscular analgesics helping to increase the response to physical exertion. The use in controlled early stages of COPD should not be used only in advanced cases without control with standard therapy. Studies based on patients with advanced cardiac insufficiency have shown to improve cardiac dyspnea and, thus, should be used in advanced cases after the underlying aetiology of the dyspnoea is treated. However, several authors alert to the risk associated with the use of opioids or dependence as a possible respiratory depression due to intoxication. The benefits and risks should always be weighed in each individual case. It should be noted when the benefit outweighs the risk, that this treatment is considered to be *off label*.

### Declaration of Interest

nothing to disclose

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8558

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### Quality of Spirometry in Primary Care: a focus on Clinical Use

Susanne van de Hei, Hendrik-Jan Baretta, Thys van der Molen, Bertine Flokstra-de Blok, Janwillem Kocks  
*Department of General Practice and Elderly Care Medicine and the Groningen Research Institute for Asthma and COPD - Primary Care (GRIAC-PC), University Medical Centre Groningen, the Netherlands*

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#### Research question

Is the quality of spirometry in primary care practices high enough to make clinically relevant decisions?

#### Background

Spirometry is essential for diagnosing airway obstruction. It is increasingly used in primary care to diagnose and to modify the management plan in respiratory patients. The quality of spirometry is traditionally assessed using the American Thoracic Society (ATS) and European Respiratory Society (ERS) criteria. However, a different approach to quality is the patient outcome; the quality being sufficient to make clinical decisions. Because this approach is more relevant for good clinical care, a more structured assessment of the actual proportion of clinically useful spirometries in primary care has to be made.

#### Possible methodology: (eg research methods, design, population, recruitment, funding):

Primary care patients who will undergo spirometry prescribed by their general practitioner (GP) as part of usual care will be included in this observational cohort study (n=150). All patients will fill in the Asthma Control Questionnaire and the Clinical COPD Questionnaire. GPs will assess the spirometries on quality and will formulate a diagnosis and treatment advice. Subsequently, two pulmonologists will evaluate the same spirometries on the same points. Finally, two lung function analysts will assess if ATS/ERS criteria have been fulfilled. The primary outcome of this study is agreement in diagnosis and treatment advice between GPs and pulmonologists using Cohen's kappa (>0.61 substantial agreement, >0.81 good agreement). Secondary outcomes are the proportions of spirometries that do and do not satisfy ATS/ERS criteria and their interaction with agreement between GPs and pulmonologists.

#### Questions to discuss

- We use real life data. Consequence is that not all patients have been tested on bronchodilator reversibility, causing differences in assessment between GPs and pulmonologists and potentially resulting in a worse agreement
- Different preferences in prescribing inhalators between pulmonologists and GPs; hence different treatment advices
- (Cost)implications if spirometry in primary care turns out to be not of sufficient quality

#### Declaration of Interest

This study is funded by Chiesi Pharmaceuticals B.V. with an unrestricted grant. SJvdH, HJB, BMJFdB and JWHK declare that they have no competing interests. TvdM is currently employee of GSK.

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8493

6.6 Digital Poster Discussion 4: Diagnosis & Assessment 01/06/2018 14:25-15:45

### Should we use an ICS stop and monitoring instrument for COPD in primary care?

Onno Van Schayck<sup>1</sup>, Geertjan Wesseling<sup>2</sup>, Janwillem Kocks<sup>3</sup>, Tjard Schermer<sup>4</sup>, Niels Chavannes<sup>5</sup>  
<sup>1</sup>Maastricht University, <sup>2</sup>Department of Pulmonology, CAPHRI, Maastricht UMC+, Netherlands, <sup>3</sup>Department of General Practice and Elderly Care Medicine, UMC Groningen, Netherlands, <sup>4</sup>Department of General Practice, Radboud Universitair Medisch Centrum, Netherlands, <sup>5</sup>Department of Public Health and Primary Care, Leids Universitair Medisch Centrum, Netherlands

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#### Research question

Should we use an ICS stop and monitoring instrument for COPD in primary care?

#### Background

Overuse of inhaled corticosteroids (ICS) in COPD patients leads to potentially avoidable harm and increased risk for negative health outcomes (e.g. pneumonia) and avoidable health care costs<sup>1, 2, 3, 4, 5</sup>. International and Dutch COPD guidelines<sup>6</sup> for primary care state that use of ICS can be considered when patients have either a concomitant diagnosis of asthma or frequent exacerbations in spite of using longacting bronchodilators. However, the actual use of ICS is roughly twice as high as the indicated use<sup>7, 8</sup>. One of the main reasons for ICS overuse is that although guidelines state what to do when criteria for ICS use are not fulfilled, they do not specify how to withdraw ICS. Therefore, we developed a guideline-based decision-support instrument for GPs to withdraw ICS in patients with COPD. This tool consists of A: a flowchart to aid decision-making on the proper use of ICS and B: monitoring instructions on how to follow-up on patients who stopped using ICS. It is the aim of the present study to assess the usability of the tool in daily practice.

#### Possible methodology:

In this implementation study we aim to investigate the usability of the ICS stop and monitoring instrument. The usability of the instrument will be assessed by GPs and GP nurses in two phases. In phase 1 the instructions of the flowchart will be followed and feedback by completing questionnaires will be provided. The flowchart will be adapted based on this feedback. In phase 2 the monitoring instructions will be assessed, by completing questionnaires. Participating GPs and GP nurses will be invited for an interview to discuss the use of the instrument.

#### Questions to discuss

If the usability of the instrument for daily use is adequate, what should a long-term study look like to properly assess the effects of stopping ICS in ICS overusing COPD patients?

#### Declaration of Interest

This study received an unrestricted grant from Boehringer Ingelheim bv NL

#### References and Clinical Trial Registry Information

1. Singh et al, 2009;
2. Mattishent et al, 2014;
3. Price et al, 2016;
4. Gonzalez et al 2017,
5. Yang et al, 2017).
6. Snoeck-Stroband et al 2015
7. Lambooi et al 2016
8. Kerkhof et al 2015

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8614

Research Ideas Posters 31/05/2018 09:00-10:00

### Smoking cessation: Impact of brief intervention in primary care, a prospective study

Lara Tomás<sup>1</sup>, Inês Jorge de Figueiredo<sup>2</sup>, Nuno Craveiro<sup>3</sup>, Carla Moreira<sup>1</sup>, Helena Palma<sup>1</sup>

<sup>1</sup>USF Lusitana ACES Dão Lafões, <sup>2</sup>USF Lusitana, Universidade de Coimbra, Universidade da Beira Interior, <sup>3</sup>USF Lusitana, Universidade da Beira Interior

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**REASERCH QUESTION:** Are routine brief interventions effective in motivating for smoking cessation in primary care?

**BACKGROUND:** Tobacco is a legal drug and is the leading cause of preventable disease, disability, and death. The prevalence of smoking worldwide is increasing in underdeveloped countries. Brief interventions (BI) involve opportunistic advice, discussion, negotiation or encouragement. They are frequently used in many areas of health promotion. For smoking cessation (SC), BI are inexpensive and typically take between 5 and 10 minutes. Although BI are always recommended they have proven to have low efficacy. Primary healthcare professionals are in the best position to frequently intervene in patient counseling and health education, therefore, learning more about the impact of brief interventions may be a useful tool for SC in primary care.

**POSSIBLE METHODOLOGY:** a prospective randomized controlled clinical trial study is suggested in order to evaluate the efficacy of BI for SC. The population considered are patients with active smoking habits. A simple random sampling would be performed to select patients. Patients are randomized and assigned into two groups. In the beginning of the study, patients' motivation for SC will be measured using Richmond test. In the intervention group: a BI is performed in every contact with primary healthcare in both nurse or physician consultations with routine reinforcements during 1 year follow-up. In the control group: BI is not routinely preformed. After 1 year follow-up, motivation will be re-evaluated, as well as the number of attempts and successful SC in patients will be checked.

**QUESTIONS TO DISCUSS:** How often do primary care professionals preform BI for SC? Do routine BI for SC increase motivation and success? Should primary care professionals search for more effective methods to promote health education and for changing behaviors in high risk patients?

#### Declaration of Interest

None to declare

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8556

Research Ideas Posters 31/05/2018 09:00-10:00

### The use of the burden of COPD instrument on self-management

Maarten Voorhaar  
Maastricht University

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#### Research question

Does the use of the burden of COPD instrument increase self-management abilities of patients?

#### Background

The burden of COPD instrument is developed to assess the experienced burden by patients. The use of this instrument will make it possible for healthcare professionals and patients to jointly develop a personal care plan. A previous study showed that using the instrument significantly improves quality of life (Slok et al 2016). However, it is unclear if the use of the instrument would influence self-management abilities.

#### Methodology

This study is an prospective, observational within-group cohort study, where 55 patients will be included. Patients will be using the burden of COPD instrument with their primary healthcare professional, and will complete the Patient Activation Measure (PAM-13) at baseline and again after 1 year. This questionnaire measures the ability of patients to be actively involved in their daily care.

To answer the research question, the total scores of the PAM on baseline and after 1 year will be compared. A difference of 5 points is considered to be clinically relevant (Fowles et 2009). The total scores will be analyzed through a paired samples t-test

#### Questions to discuss

This is an active study, results are not yet known. However, we expect that based on the results, recommendations can be made on the use of the burden of COPD instrument. Also, we like to further improve tailored support based on existing self-management abilities, to optimize the use of the instrument,

- Which practical self-management support programs have evidence it can improve self-management abilities in COPD care?
- Are such support programs tailorable on coping and/ or self-efficacy?
- What skills do healthcare professionals need to provide tailored support to increase self-management by patients?

**Declaration of Interest: M. Voorhaar is an employee of Boehringer Ingelheim NL bv, who also provided an unrestricted grant for this study**

#### References and Clinical Trial Registry Information

##### Literature

- Slok AHM, Kotz D, van Breukelen G, et al. Effectiveness of the Assessment of Burden of COPD (ABC) tool on health-related quality of life in patients with COPD: a cluster randomised controlled trial in primary and hospital care. *BMJ Open* 2016;6:e011519
- Fowles JB, Terry P, Xi M, Hibbard J, Bloom CT, Harvey L. Measuring self-management of patients' and employees' health: Further validation of the Patient Activation Measure (PAM) based on its relation to employee characteristics *Patient Education and Counseling* 77 (2009) 116–122

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8669

Presented at: 2.3 Oral Abstracts 1: Research Ideas 31/05/2018 16:05-17:30

### To document pneumonia case management practices in selected communities in Pakistan; A qualitative study (RESPIRE project)

Tabish Hazir<sup>1</sup>, Hana Mahmood<sup>1</sup>, Syed Yahya Sheraz<sup>2</sup>

<sup>1</sup>MNCHRN, <sup>2</sup>International Research Force

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Research question: What are the standard practices of pneumonia case management at three levels of health care; community level, first level care facility and practitioner level across Pakistan?

Background: Pneumonia continues to be one of the leading killers, accounting to around 16% of under-five mortality in Pakistan. WHO and UNICEF have developed multiple action/ intervention plans to curb pneumonia related morbidity and mortality based on which Pakistan launched multiple national programs (ARI, MNCH, IMCI etc.). Under all these programs, selected health care professionals, both community and facility based, were trained on WHO standards of ARI case management. Looking at the unchanged mortality statistics, there is a concern that these trainings might have failed to change the case management practices within the community. We, therefore, aim to identify pneumonia case management practices to determine adherence to standard treatment guidelines.

Possible methodology: We shall conduct participant, structured, disguised observations using a validated observation tool based on standard WHO pneumonia case management guidelines. Our data collector (a physician by experience) will identify cases of pneumonia in the community and request the caregiver of the identified patient to accompany him/her as a disguised caregiver to the randomly selected healthcare professional to be observed. The caregiver will identify the data collector as an acquaintance to the healthcare provider. While the patient is being managed, the data collector will make observations. 160 observations across randomly selected locations of four provinces will be conducted. Data will be entered in tablets and received centrally to our password enables system for analysis.

- Questions to discuss: What are the differences in pneumonia case management observed across the provinces?
- What interventions are needed, feasible and affordable to improve pneumonia management?
- What are the barriers to, and facilitators of, implementation of guidelines?

#### Declaration of Interest

Funding source is NIHR

#### References and Clinical Trial Registry Information

1. National Institute of Population Studies, Macro International (2008). Pakistan Demographic and Health Survey 2006-07. Islamabad (Pakistan): National Institute of Population Studies, Macro International.
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## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8596

Presented at: Research Ideas Posters 31/05/2018 09:00-10:00

### What are the spirometry predictive values for Western Indian population?

Dhiraj Agarwal<sup>1</sup>, Richard Parker<sup>2</sup>, Hilary Pinnock<sup>2</sup>, Sanjay Juvekar<sup>3</sup>

<sup>1</sup>KEM Hospital Research Centre, <sup>2</sup>University of Edinburgh, Edinburgh, <sup>3</sup>KEM Hospital Research Centre, Pune, India

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#### Research Question

What are the spirometry predictive values for Western Indian population?

#### Background

Spirometry is the gold standard for accurate and repeatable measurement of lung function. Interpretation of spirometry involves looking at lung function parameters in comparison with predicted values to determine the presence and severity of the disease. The ERS Global Lung Function Initiative derived reference equations for healthy individuals aged 3–95 years based principally on Caucasian, African–American, and North Asian and South China/Thailand/Taiwan populations. India is highlighted as a ‘particular’ group in whom further data is needed (Quanjer et. al ERJ 2012). Reliance on values derived from non-Indian populations may lead to under or overdiagnosis of disease. To overcome this, there is a need to develop predictive values specific to ethnic groups within the Indian population.

#### Possible methodology

We will use previously-collected spirometry data from 2,500 adults aged 18 years and above from Vadu Health and Demographic Surveillance System population to develop the predictive values for the Western Indian population. We have detailed medical, personal, biomass usage, smoking status and socio-demographic information for all these individuals, based on which we have classified individuals as healthy and non-healthy as per published literature and guidelines.

We will construct reference ranges for FEV<sub>1</sub>, FVC, and FEV<sub>1</sub>/FVC based on the overall population and construct spirometric reference equations which depend on age, sex, height, and body weight by using the GAMLSS method (Quanjer et. al ERJ 2012).

#### Questions to discuss

We will be following the standard process for determining reference standards. The questions are around dissemination and deciding on thresholds for defining disease (e.g. fixed ration vs lower limit of normal).

#### Declaration of Interest

Funder: NIHR Global Health Research Unit on Respiratory Health (RESPIRE) 16/136/109

#### References and Clinical Trial Registry Information

Not Applicable

## Research Ideas on Respiratory Conditions and Tobacco Dependency

Abstract ID = 8534

6.6 Digital Poster Discussion 4: Diagnosis & Assessment 01/06/2018 14:25-15:45

### Will a Digital 'App' help clinicians in withdrawing ICS from appropriate COPD patients?

Alan Kaplan<sup>1</sup>, Tsiglianni Ioanna<sup>2</sup>, Miguel Roman Rodriguez<sup>3</sup>, David Price<sup>4</sup>

<sup>1</sup>Family Physician Airways Group of Canada, <sup>2</sup>University of Crete, <sup>3</sup>Instituto de Investigación de Palma de Mallorca, <sup>4</sup>Research in Real Life

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#### Aim:

To develop and validate a mobile application to encourage and assist clinicians in withdrawing ICS from appropriate COPD patients

#### Context:

ICS are overused in patients with COPD, but their value in managing COPD is limited and they are associated with significant adverse effects. The IPCRG endorsed a desktop tool called the COPD ICS Withdrawal Tool to assist clinicians in working through the withdrawal steps for their patients.

#### Intervention description:

The creators of the desktop tool working with digital programmers will digitalize the tool allowing it to be used at the point of care to assist the clinician in making the correct decision as to withdraw ICS or not, and how to do that in a safe and effective manner.

#### Strategy for change:

Our first step is allow clinicians to review for cognitive understanding and to see if they feel it to be clear, understandable and worthwhile. Secondly we plan to assess feasibility and implementability to show how the tools functions to assist clinicians in the steps for ICS withdrawal, reviewing patient outcomes.

#### Effects of change:

To review and highlight the importance of the issue and empower clinicians to consider implementing the steps in the withdrawal tool.

#### Lessons Learned:

Just because a tool is created, there is no guarantee that it will be used; we hope that digitalizing it will further empower clinicians.

#### Messages for others:

This 'App' will made ICS withdrawal in patients with COPD easier to work through and help to guide the clinician to do it appropriately.

#### Declaration of Interest

Novartis will support the development of the App, but no payments for the production and study of the application have or will be paid to the Authors.